Combi-Oven

MODELS 1.06, 1.10, 2.10
Service Manual

BKI®

Fresh ideas in foodservice equipment

Warranty Information

Your new BKI Combi has a 12 month factory warranty covering oven cabinet and parts. However, heating elements in oven chamber are guaranteed for 24 months.

The factory warranty does not include glass parts, including glass in oven door, glass cover, bulbs and door gasket.

Moreover, the factory warranty will terminate upon:

- Errors that can be assigned to irregular installation e.g. electricity, water/drain, air exhaust, according to BKI's current installation and service manual.

- Errors and interruptions of operation resulting from irregular operation according to the directions in the user's manual.

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Introduction

We congratulate you on your new BKI Combi.

By the purchase of a BKI Combi, you now possess one of the market's leading oven products for professional kitchens. All BKI Combis are currently subjected to intensive product development that ensures that the products are always based on the latest technology as well as the most modern and energy-saving techniques of preparation.

Moreover, the products from BKI are up-to-date with the latest development/technology as regards:

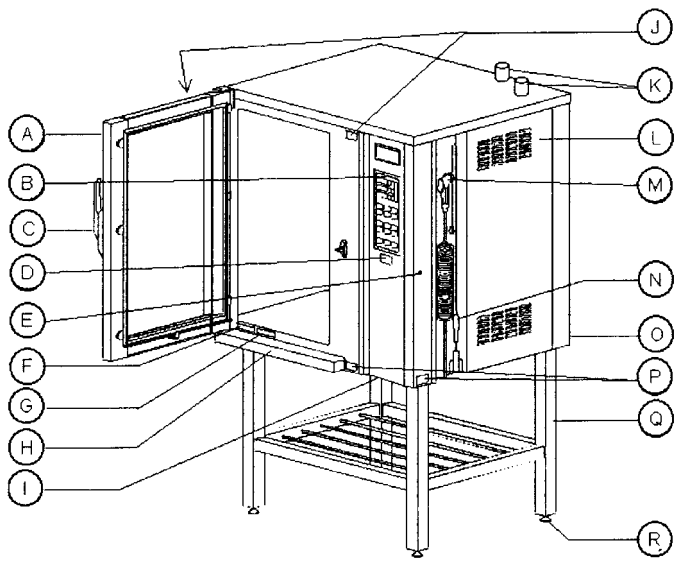
- ERGONOMICS AND SAFETY
- SIMPLE AND LOGICAL OPERATION
- EASY-TO-OPERATE DESIGN
- RELIABILITY AND SERVICE

To ensure our customers an optimum and reliable product, prior to dispatch, all BKI Combis have passed through an extensive test programme in which all functions are subjected to a continuous and extreme load.

Before use and to make the best use of the many facilities and advanced technique of the BKI Combi, it is important that you are aware of working ranges and possibilities of application of the steamer. We thus recommend you study the user's manual thoroughly before using the steamer. By this, you can - as a user - make sure that you achieve optimum cooking results through appropriate and safe operation. By going through the user's manual, you will save time

Description

Refer to illustration below for a description of the unit.



(A) Oven door
(B) Operating panel
(C) 2-step safety handle
(D) *Rethermalize on High Speed only!*
(E) Plug for core temperature probe
(F) Serial plate
(G) *Risk of fire - space oven a minimum of 2 inches from the rear and side wall*
(H) Drip tray
(I) Ball valve for hand shower
(J) *Hot surface*
(K) Exhaust
(L) Cover for electric parts
(M) Hand shower
(N) Core temperature probe
(O) Drain
(P) *Risk of electric shock. Disconnect power before servicing*
(Q) Stand
(R) Adjustment legs

Safety Precautions

Always follow recommended safety precautions listed in this manual. Below is the safety alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury or property damage.

Safety Signs and Messages

The following Safety signs and messages are placed in this manual to provide instructions and identify specific areas where potential hazards exist and special precautions should be taken. Know and understand the meaning of these instructions, signs, and messages. Damage to the equipment, death or serious injury to you or other persons may result if these messages are not followed.

⚠DANGER This message indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING This message indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

⚠CAUTION This message indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE This message is used when special information, instructions or identification are required relating to procedures, equipment, tools, capacities and other special data.

Specific Precautions

⚠WARNING Risk Of Electric Shock Disconnect Power Before Servicing

For Continued Protection Against Risk Of Fire And Electric Shock, Replace With Fuses Of Same Rating

Rethermalize on High Speed only!

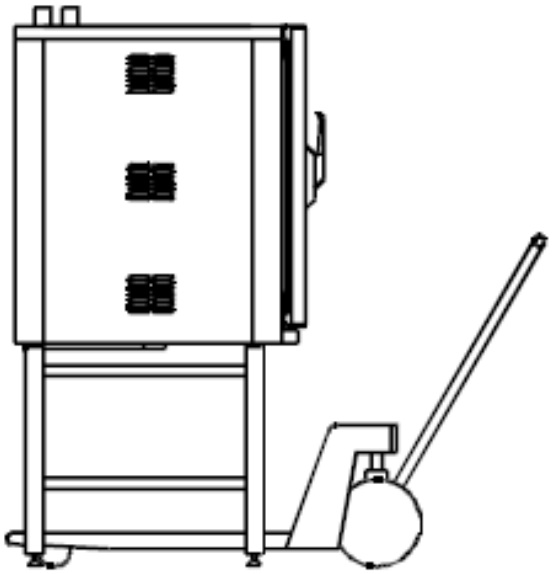
Hot surface can cause severe burns. Do not touch.

NOTICE Replace Oven Halogen Lamps with 12V, 20W maximum

Installation

Unpacking the Oven

The oven is best handled while in its wrapping. Use a lifting trolley whenever possible. Introduce the lifting trolley under the lower cross tube of the stand and place a couple of wooden blocks between the cross tube and the lifting trolley.



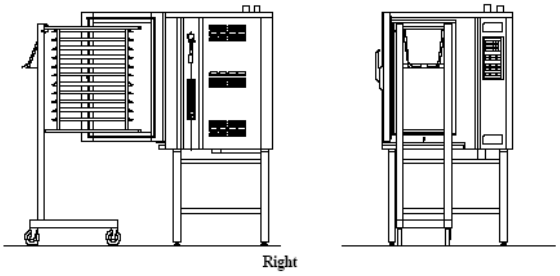
To achieve the best possible balance, introduce the lifting trolley from the front of the oven or from the motor side. Note that the oven can be lifted off the stand. Remove the original packaging from the oven. Do not remove the foil that covers the surfaces until the oven has been installed, as the surfaces are vulnerable to sharp objects such as tools, once the foil has been removed. Remove all protecting parts that secure the racks in the oven compartment.

NOTICE

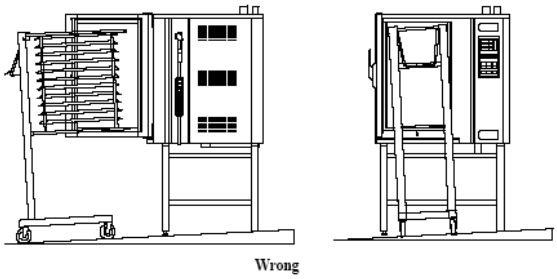
The packing must be destroyed in accordance with the rules and regulations covering the disposal of rubbish in your country. Information on the packaging material can be obtained from our technical department.

Positioning of oven

To ensure that the oven functions correctly when installed, it should be placed upright and level (horizontally). This is measured at the front edge and side edge of the roof, and adjustment is made by means of the adjusting screws on the stand or on the legs of table models. The height of the oven can also be adjusted to fit the trolley for rack.



Right



Wrong

The oven should be placed at least 2 inches from the rear wall and the distance between the sides of the oven and the nearest wall or piece of furniture, etc. should be at least 4 inches. This is to ensure the necessary flow of cooling air to the oven. Strong sources of heat such as frying pans, fryers, etc. should not be placed near the oven, especially not on its right side; otherwise the warranty may cease to apply.

Water Connection

As standard, the BKI Combi has one water connection. To facilitate cleaning and service, the oven should be connected with an approved flexible 1/2" hose and the permanent installations should be fitted with a stop-tap for the water supply to the oven.

Before connecting the oven to water, flush the water tubes thoroughly. Then fit the dirt filter and connect the oven.

Water Requirements

Hardness:	max. 3 dH
Conductivity:	min. 75 microsiemens
Water pressure	min. 1.5 bar (150 kP), max.6.0 bar (600 kP).
Water pressure Combi Clean:	min. 2.5 bar dynamic pressure (CombiClean activated)
Water temperature:	max. 20°C
Chloride concentration:	max. 100 mg/litre

If the feeder is connected to the water distribution system with a flexible hose, this hose should be VA approved.

⚠CAUTION **A reversed osmosis plant must not** be connected to ovens with a steam generator as this may cause problems with respect to the registration of the water level in the steam generator.

⚠CAUTION An authorized plumber in accordance with existing rules and regulations MUST carry out the water connection.

NOTICE Clogged up water filters and dirt in solenoid valves are not covered by the warranty.

Alternatively, the oven can be supplied with two water connections (optional equipment):

1. for raw water for condensation nozzle (cold water)
2. for nozzle in oven cabinet and steam generator. Must meet the requirements made on water for drain connection, however, the water temperature must not exceed 140°F.

Exhaust

The BKI Combis are equipped with an open/direct exhaust system that removes surplus humidity from the oven compartment. The exhaust system has electrically or manually operated air exhaust.

The vent pipe can be connected to a ventilating system. In this case, a special extraction funnel is fitted to avoid suction directly from the oven compartment. This extraction funnel can be ordered from BKI.

If an extraction hood is installed in the ceiling above the oven, it should project 50 cm over the front of the oven. The suction effect should be 400 - 800m^3/h.

The ventilation motor can be controlled directly from the oven. This means that the ventilation starts when a program is started and runs for 5 minutes after the program is finished.

Electrical Connection

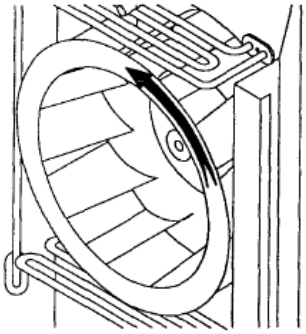
An authorized electrician in accordance with existing rules and regulations must carry out the electrical connection.

There is a wiring diagram in the motor room.

Locate an **approved plug outlet** or a contact breaker close to the oven so that the oven can be disconnected during repair and installation. The breaker must be able to cut off all poles with a length of break of at least 3 mm. To facilitate cleaning and service, use an approved flexible connection cable, type H05RN-F.

The oven may leak 1 mA current per kW.

⚠CAUTION After connection, check that the fan rotates in the right direction, i.e. COUNTER-CLOCKWISE.



If the fan rotates in the wrong direction, the oven does not operate correctly, which may cause damage to the oven.

NOTICE The warranty does not cover incorrect connection.

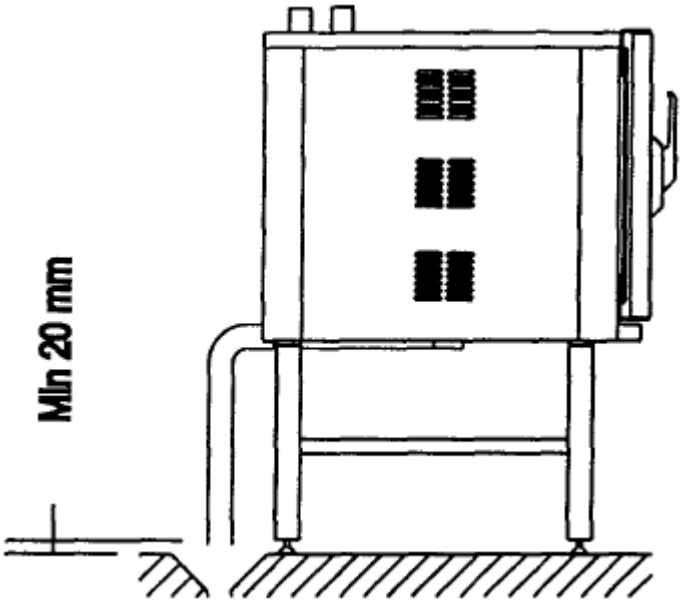
Knock out openings for supply connection

Open type	Thread Size	Amps	Cable	Size / opening
2.10 - 2.14	1 1/2	70	2 AWG	50.0 mm
1.16	1 1/4	56	4 AWG	43.7 mm
1.10	1	42	6 AWG	34.5 mm
1.06	3/4	22	10 AWG	27.8 mm

Drain Connection

As standard, The BKI Combi is equipped with a drain system that removes surplus water from the oven compartment. Water may occur when steam is used in the oven and when the oven is cleaned.

⚠CAUTION An authorized plumber must carry out connection. The oven **must** be connected to an open drain and the connection **must** end at least 20 mm above the outlet grating or funnel.



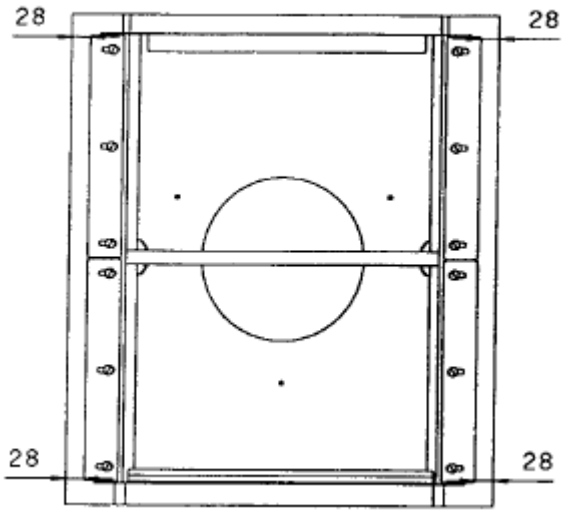
The drain must never end directly under the oven. The drain tube must be of stainless steel, have a diameter of at least 38 mm and a fall of at least 3° or 5%.

⚠CAUTION Never connect directly to a water trap so as to avoid obnoxious smells, bacteria and possibly low pressure, suction or overflow.

Adjusting Flaps

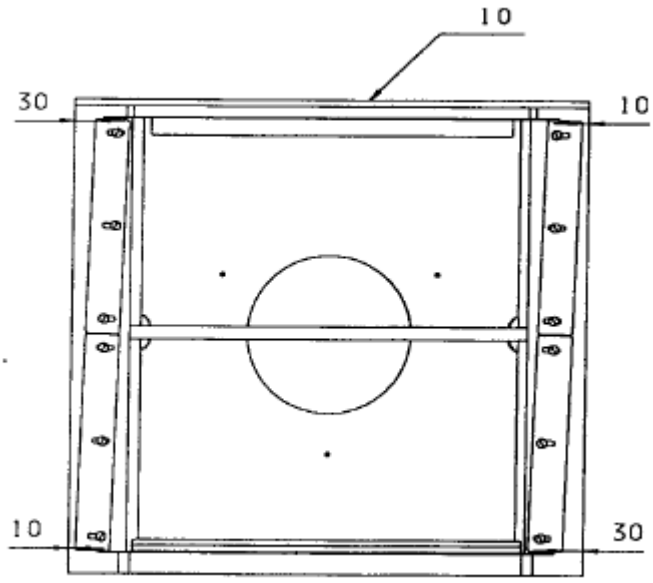
The flaps can be adjusted individually to achieve a uniform baking result. Experience shows that the following basic setting produces the best result in the vast majority of cases Air gap setting in mm:

Type 1.06 and 1.10



Type 2.10

For types 2.10 we recommend that a 10 mm rail be fitted at the top (part no. O 11.588).



Setting System Options for CVC Controller

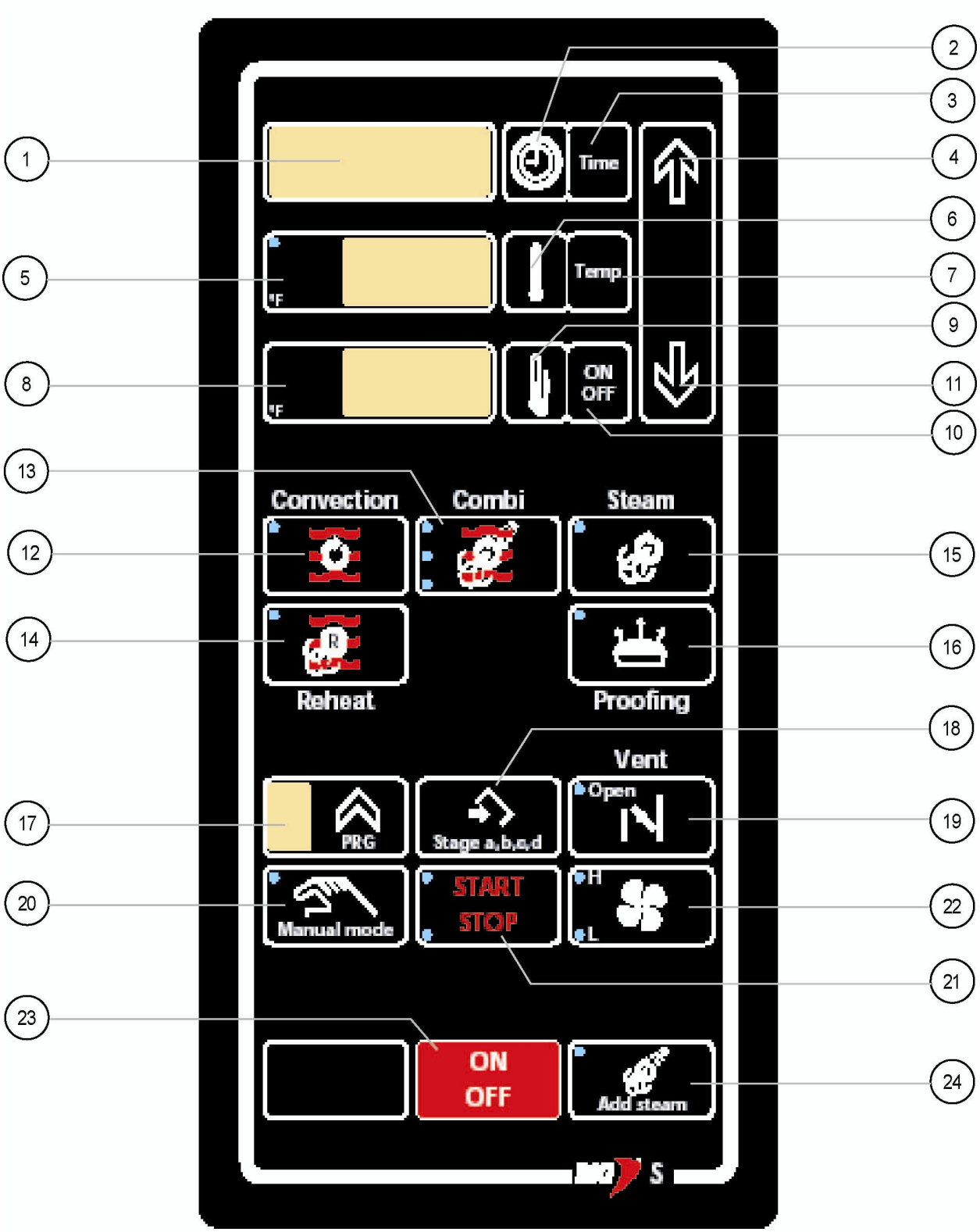
System options are set through Engineering menus. To access these menus press and hold the F1 key while pressing the START/STOP key. A list of menu commands will appear in the display. To see additional menu commands press F1. To return to the main display, press the ENTER/STEP key. To select a command, access it's menu then press the numeric key associated with the command. Upon selecting a command, its options will be displayed. To select/activate and navigate the command options use the keys specified on the display. Return to the Engineering menu by pressing F1. The following table lists the command options that need to be set to enable proper operation of the BKI Combi.

CVC Controller System Settings

Menu Command	**Option Settings**
1 = TEST FUNCTION	Only used to troubleshoot oven.
2 = ENCODE OVEN TYPE	2 = Autorestart
3 = SELECT LANGUAGE	4 = GB
2 = Adjust PT100 sensors	The values are factory set by the manufacturer. Consult manufacturer before adjusting.
3 = Set Restart Time	Leave as is
1 = Oven Light ON/OFF	1 = Oven light 5min.
2 = Phase Test	OFF
3 = Transfer all menus	Enter = OK
1 = Setup	Oven type (2 = CVC) Temperature mode (2 = Fahrenheit) Keyboard (2 = BKI) Special mode (1 = Normal) Fan (1= Single direction) Language (4 = GB)
2 = Motor Alarm	OFF
3 = Cleaning mode	1 = Normal 2 step
1 = Access Code	OFF
2 = Warm up in step 1	Normal 6 step
3 = Condensation ON/OFF	Leave as is
4 = Show empty tray	Leave as is

Setting System Options for S Controller

Refer to the figure below as necessary while using this section.



Start-Up Window

When the computer is switched on, it checks all control lamps and segments to make sure that they work. Figures appear in the displays:

- The time display shows how U1 is set.
- The temperature display shows the current EPROM version.
- The display for core temperature shows whether the computer includes CombiClean (0 = without CC, 1= with CC).

Accessing the Set-Up Mode

Select the set-up mode by pressing key (4) and key (2) simultaneously for 5 sec. U1 appears in the time display. Shift to the next setting (max. U5) by pressing key (2). The set-up mode can be interrupted/closed any time by pressing key (18).

U1: Selecting Automatic Restart, Oven Model And Voltage

Automatic restart
1 or 0 is shown in the time display (1).

0 = The oven will not restart a program that has been interrupted because of power cut.

1 = The oven will restart a program that has been interrupted because of power cut.

Shift by pressing key (3).

Oven model
A digit between 1 and 6 is shown in the program display (17).

1 = CM, 2 = CV, 3 = BM, 4 = ST, 5=S, 6=VS

Shift by pressing (17).

Voltage
1 or 2 is shown in the core temperature display (8).

1 = Voltage with 0

2 = Voltage without 0

Shift by pressing the core temperature key (9).

U2: Selecting Interior Light

When the program display (17) shows 5, the interior light is automatically switched off after 5 min.

When the program display (17) shows 0, the interior light will shine continuously.

When the program display (17) shows 6, the interior light is automatically switched off after 5 min. In addition, the light in the oven door is switched off after 3 sec. when the door is opened.

When the program display (17) shows 1, the oven light will shine continuously. In addition, the light in the oven door is turned off after 3 sec. when the door is opened.

Settings 1 and 6 are very useful on ovens with oven light in the door in order to avoid blinding while the door is open.

Shift by pressing (17).

U3: Adjusting Temperature Sensors (Pt-100)

The digit of the sensor in use is shown in the program display (17).

1 = oven chamber, 2 = probe, 3 = steam generator, 4 = condensation

Change the digit by pressing the program key (17).

The current temperature is shown in the temperature display (5).

The set point is shown in the core temperature display (8)

Standard set point = 100, which can be adjusted downwards to 80 and upwards to 120 with the arrow keys.

Each temperature sensor can be adjusted/corrected by approx. +/-10°C, i.e. the temperature changes in steps of 0.5°C.

The core temperature display holds only 2 digits, consequently 80 = 80, 00 = 100 and 20 = 120.

U4: Selecting Pre-Set/Current Temperature, Combiclean, Additional Detergent, Showdisplay And Printer

Pre-set/current temperature
1 or 0 is shown in the time display (1).

0 = Pre-set temperature (standard)

1 = Current temperature during operation

Shift by pressing (3).

CombiClean
The oven size is shown in the temperature display (5).

You change between oven sizes by pressing the temperature key (7).

Additional Detergent
If the oven chamber is not properly clean when the cleaning program is completed, it is possible to add additional detergent.

Press the key for manual humidity (24) until the control lamp is turned on. ”Additional detergent” is now active.

Note that the programs are prolonged by 5 minutes + the detergent phase.

If the control lamp is off, this function is off.

Demo mode
It is possible to select a demo mode in which the oven rinses only.

Press the exhaust key (19)until the control lamp is turned on.

Showdisplay
Press (17) until the display shows 1.

The control lamps in (23) and (22) flash to indicate that the keys are active.

By pressing (23), you reserve memory in the showdisplay for the 16 programs.

With (22), you enter a start text for each program. However, this is usually not necessary, as the showdisplay is ready for use on delivery.

If you have deleted or ruined a program, press (9) and select the program you have just ruined and then to enter the start text again.

Note that there should be at least 20 characters in the program on the showdisplay in order for the start text to be transferred.

Note! When the showdisplay is active, the printer cannot be used.

Printer
Press (17), until the display shows 0. The printer output is thus activated.

Press (18) to enter the start-up menu.

Press (20) for 5 seconds. The time display now shows PR*nt, “Yes” in the temperature display and “No” in the display for core temperature probe.

Press (6).

The printer output is now activated.

To switch off the printer output, press (9)
.
Note! When the showdisplay is active, the printer cannot be used.

U5: Selecting Phase Sequence Test And Reversing

Phase sequence test
Phase sequence test is usually always active.

This alarm can be deactivated in the case of installation for demonstration purposes in order to avoid error code 15.

The temperature display shows either ON or OFF. ON and OFF are selected by pressing (6).

Reversing
In the reversing function, it is possible to set the time before reversing as well as the time of the interval.

Change between 0, 1 and 2 by pressing (17).

0 = “Reversing” is switched off and the time is not shown (standard)

1 = “Reversing” is switched on and error code 5 “Fan too hot” works reversely because the thermo-switch of the motor used is open and closes when the temperature is too high.

2 = “Reversing” is switched off and error code 5 “Fan too hot” works as usual, i.e. the thermo-switch is closed and opens when the temperature is too high.

The time during which the fan is running is shown in the time display (1) and is set between 10 and 99 with the arrow keys (4, 11). Each step corresponds to 2 seconds, it is therefore possible to set the time of the intervals between 20 and 198 seconds (standard is 50 = 100 seconds). The time of the interval is shown in the core temperature display (8) and is set with the core temperature key (9) and the core temperature ON/OFF key (10).

The time can be set between 1 and 30 seconds (standard = 10 seconds).

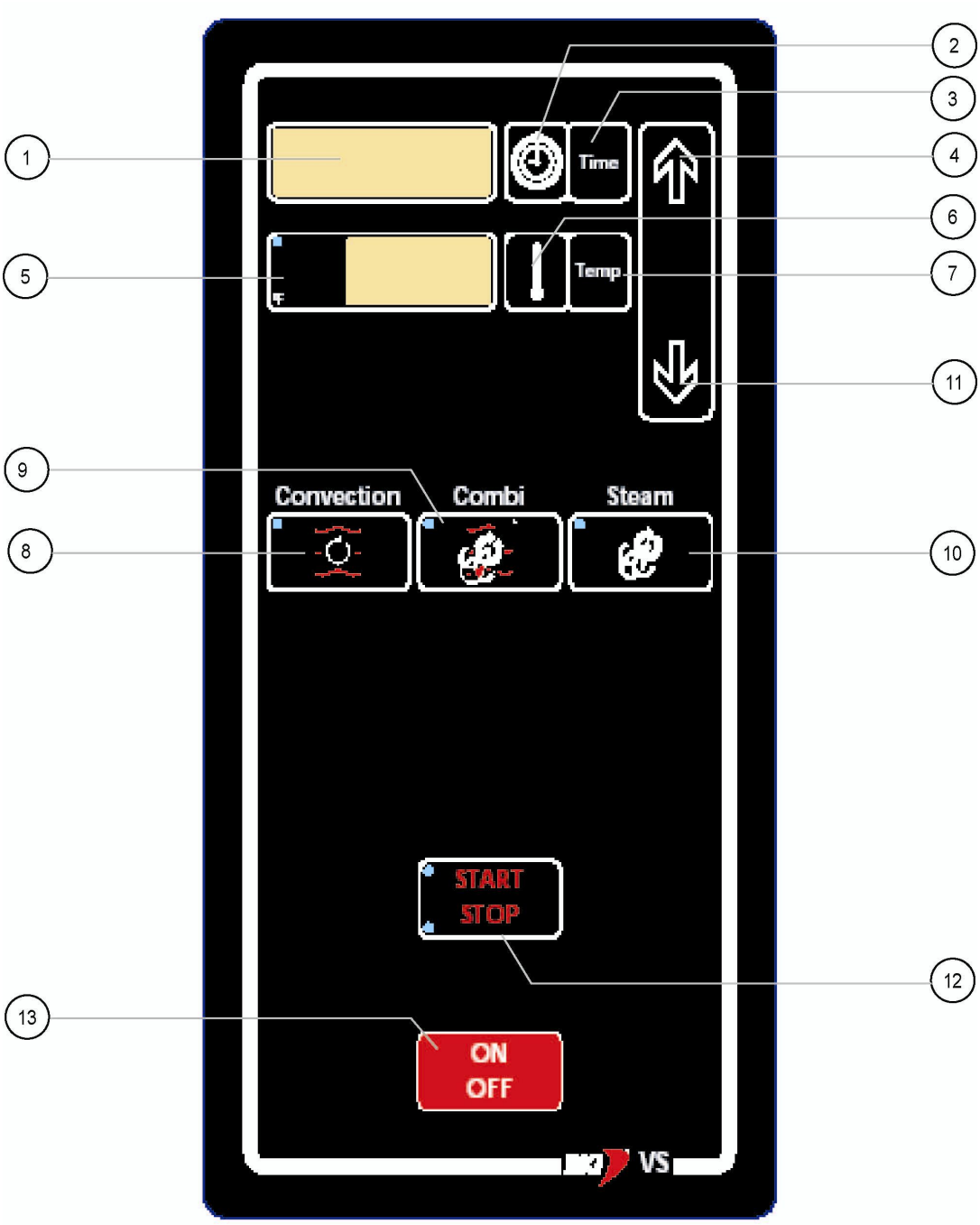
S Controller System Settings

Set-Up Mode	Settings
U1	Automatic restart (1) Voltage (1) Oven Model (5)
U2	Interior light (5)
U3	Leave as is
U4	Pre-set/current temperature (1) CombiClean (select your oven size)* Additional Detergent (press manual humidity key until lamp turns on)* Printer (Not applicable)
U5	Phase Sequence Test (OFF) Reversing (2)

** - Only with CombiClean models.*

Setting System Options for VS Controller

Refer to the figure below as necessary while using this section.



Start-Up Window

When the computer is switched on, it checks all control lamps and segments to make sure that they work. Figures appear in the displays:

- The time display shows how U1 is set.
- The temperature display shows the current EPROM version.

Accessing the Set-Up Mode

Select the set-up mode by pressing key (4) and key (2) simultaneously for 5 sec. U1 appears in the time display. Shift to the next setting (max. U5) by pressing key (2). The set-up mode can be interrupted/closed any time by pressing key (12).

U1: Selecting Automatic Restart

Automatic restart
1 or 0 is shown in the time display (1).

0 = The oven will not restart a program that has been interrupted because of power cut.

1 = The oven will restart a program that has been interrupted because of power cut.

Shift by pressing key (3).

U4: Selecting Pre-Set/Current Temperature

Pre-set/current temperature
1 or 0 is shown in the time display (1).

0 = Pre-set temperature (standard)

1 = Current temperature during operation

Shift by pressing (3).

U5: Selecting Phase Sequence Test And Reversing

Phase sequence test
Phase sequence test is usually always active.

This alarm can be deactivated in the case of installation for demonstration purposes in order to avoid error code 15.

The temperature display shows either ON or OFF. ON and OFF are selected by pressing (6).

VS Controller System Settings

Set-Up Mode	Settings
U1	Automatic restart (1)
U2	Not Used
U3	Not Used
U4	Pre-set/current temperature (1)
U5	Phase Sequence Test (OFF)

Initial Checks and Adjustments

Upon completion of the installation, perform the following to ensure proper operation of the oven.

Category	Activity	Date Performed
Oven exterior	• Check that the oven has suffered no transport damages (dents, scratches, etc.) • Check/adjust height and check that the oven is placed level (horizontally)	
Connections	• Check for correct water connection o open water supply o check for leaks o close water supply o check and clean dirt filter o reopen water supply o check hand shower and stop tap (under the oven) • Check correct electrical connection • Check correct drain connection o check correct mounting of drip tray o check correct fall of hose from drip tray, and examine for leaks • Check correct exhaust connection • Clean the oven • Apply the steel oil which is delivered with the oven	
Oven compartment	• Check the direction of rotation of the fan • Check that the filter housing is mounted correctly • Check interior light • Clean the oven	
Operating panel	• Check and adjust, if necessary, each of the pre-set values • Heat up the oven to 482°F for approx. 5 min.	

Maintenance

Scheduled Maintenance

Category	Perform	Activity
Entire Unit	Daily	Cleaning (Refer to cleaning procedure)

Oven exterior	Annually	• Oven door
		  ○ check that hinges are firmly fixed and that the oven door is fitted straight in relation to the oven
		  ○ check door sealing for cracks
		  ○ check/adjust 2-step door handle
		  ○ check/adjust inductive sensor/door switch
		• Exhaust plug/vacuum valve
		  ○ Check for leaks
		  ○ Check for/remove scale deposits

Connections	Annually	• Water connection
		  ○ check for leaks
		  ○ check and clean dirt filter
		  ○ check hand shower and stop tap (under the oven)
		• Electric connection
		  ○ check for irregularities
		• Exhaust
		  ○ check/adjust exhaust plate and motor

Oven compartment	Annually	• Check that the fan has been correctly fixed and that it rotates freely
		• Check/adjust filter housing and flaps
		• Check interior light
		• Check/adjust rack and trolley for rack to ensure that the height of the oven is correct
		• Check nozzle for correct dispersion
		• Heating elements
		  ○ check gaskets
		  ○ check/tighten heating elements
		  ○ start the oven, activate the mode HOT AIR for a couple of seconds, then turn off the oven and check that all heating elements are lukewarm

Operating panel	Annually	• Test each program for a short period
		• Check temperature
		  ○ set the oven at HOT AIR, 338°F
		  ○ set the oven at STEAMING, 212°F
		  ○ check the oven temperature with a digital thermometer that has been thoroughly tested and approved.

Category	Perform	Activity

Under the oven	Annually	• Solenoid valves
		  ○ check hoses
		  ○ clean solenoid valves
		  ○ check that solenoid valves close
		• Check/test drain pump
		• Drain
		  ○ check for leaks in drain system
		  ○ check that drain system is not blocked
		  ○ Check condensation nozzle in drain tube
		• Drip-tray system
		  ○ check/adjust drip-tray springs
		  ○ check drain basin and hose from drip tray
		  ○ check correct fall of hose
		  ○ check passage in hose (clean out hose, if necessary)

In motor compartment	Annually	• Heating elements for oven compartment
		  ○ check insulation for leaks
		  ○ check for electric leakage ("megges")
		  ○ check load distribution on phases
		• Steam generator
		  ○ check for leaks
		  ○ check for electric leakage in heating elements ("megges")
		  ○ check load distribution (idling) on phases
		  ○ check rubber gaskets at heating elements
		  ○ check/tighten heating elements
		  ○ check/adjust level sensors
		  ○ descale steam generator
		• Check/tighten copper tube connections
		• Check/tighten all electric connections
		• Contactors
		  ○ check that there are no bad connections
		  ○ check that all components are firmly fixed
		• Check/test motor for damper in air exhaust
		• Fan motor
		  ○ check that the motor is firmly fixed
		  ○ check direction of rotation
		  ○ check gasket at motor shaft

Cleaning

The construction of the BKI Combi makes it very easy to clean. The oven compartment is all-welded in stainless steel and accordingly splash proof. You will find the easy-to-use hand shower with flexible hose very suitable for inferior cleaning.

The door gasket at the oven door can easily be removed which ensures a quick and efficient cleaning around it

The flat front panel also makes the exterior cleaning quick and efficient.

1. Interior cleaning

Manual Method

a. Always clean the oven when it is cold or cool the oven compartment down to below 140°F.
b. Add mild or strong oven detergent (according to requirement) with a soft brush to the sides of the oven compartment, rack etc. Protect your face and hands as the oven detergent may be caustic.
c. Leave the oven detergent for approx. 5-10 min.
d. With the MULTI STEAMING mode, the oven is set to steam for approximately 10 min. at 194°F.
e. Flush the oven compartment with the hand shower.
f. Check that the water can pass freely through the drain. The grating that comes with the oven is to be placed over the drain hole inside the oven.

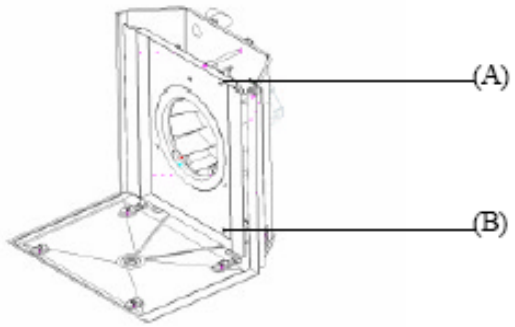
Integrated Cleaning Program (CVC and S Controllers only)

a. Choose the cleaning program (“198” for CVC controller and “C” for S controller). The display says “CLEA”.
b. Press “START”.
c. Apply an oven detergent with a soft brush or a sprayer when the alarm sounds and the display says ”SOAP”.
d. Close the oven door.
e. When the alarm sounds and the display says ”AQUA”, rinse the oven chamber with the hand shower.

⚠CAUTION Never use high-pressure cleaner. Never spray water directly on heating elements behind the filter housing.

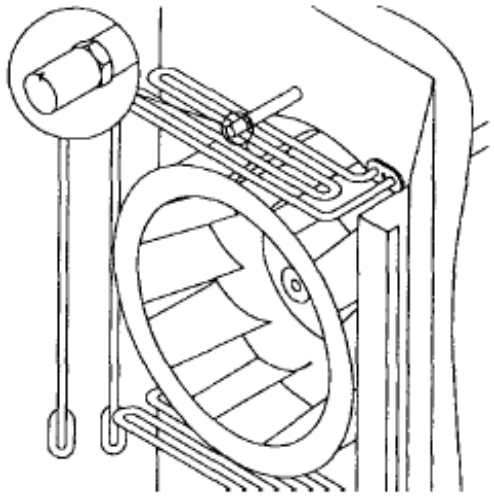
2. Cleaning behind filter housing

For a more thorough cleaning of the oven compartment, the filter housing is removed so that it is possible to clean at the fan and the heating elements. You loosen the 2 screws (A) and (B) on the filter housing. The filter housing is demounted by lifting it up till it is clear of the bottom pin and then tipping it.



3. Cleaning of Nozzle

The water nozzle can be dismounted and cleaned according to needs. The easiest way of cleaning the nozzle is by soaking it in scale remover for approx. 6-8 hours. When remounting the nozzle, note that the small notch will turn upwards, see the figure below.



4. Exterior Cleaning

The oven cabinet is washed with soapy water and then dried with a soft and moist cloth. After drying, steel oil is to be added (refer to directions on the packing). Note! The exterior of the oven is never to be flushed with water hose or high-pressure cleaner which may damage the electronic components.

Troubleshooting

Error Codes

The BKI Combi ovens have an automatic error detecting system. In the event of malfunctioning of the oven or faulty connection, error codes (for S or VS controller) or messages (for CVC controller) appear in the display. This means that any defects are specified immediately and can be remedied quickly and efficiently, which again means fewer interruptions of operation and thus fewer service calls. The following list of error codes provides you with a brief description of each error code and an indication as to how the fault can be remedied.

Error Code Number	Error Message	Possible Cause	Remedy
1	Program switch defective	The program switch has been turned beyond stop position.	Replace computer.
3	Faulty connection		Reconnect terminals 2 and 21 in plug S2.
4	Oven chamber above 305°C	The temperature circuit breaker for the oven compartment has gone. The oven cannot be operated until the defect has been remedied.	Reconnect the thermostat that is located in a hollow under the oven on the left-hand side of the front panel, by pressing the red button gently. Note that the thermostat may be disconnected during transport.

Error Code Number	Error Message	Possible Cause	Remedy
5	Fan is hot (The temperature circuit breaker in the fan motor has gone.)	• Breaking of phase / fuses • Fan blocked by incorrectly fitted filter housing • Fan rotating in the wrong direction The oven cannot be operated until the defect has been remedied.	Check fuses in switchboard. Check that the filter housing has been correctly fitted on the pins. Let the oven cool for approx. 20-30 min., then restart it. Check that the direction of rotation of the fan is counter-clockwise (looking at the fan from inside the oven compartment).
6	Drain temperature above 75 °C (The drain temperature is normally kept below 60°C by means of the built-in condensation nozzle. If the drain temperature exceeds 75 °C for more than 5 min., error code 6 will appear for a short moment at the beginning and at the end of the operating mode.)	Dirt in solenoid valve, nozzle or dirt filter, hot water connected or defective sensor for condensation. The oven can be operated even if the defect is not remedied.	Check that the oven is connected to cold water. Clean solenoid valve, nozzle or filter.
7	Oven sensor defective	The temperature sensor in the oven chamber is defective. The oven cannot be operated until the defect has been remedied.	Replace sensor.
8	Core temperature probe defective or wrongly fitted	Probe is not fitted in socket. Probe defective, socket for probe defective or short-circuited (due to water or fat). The program cannot be used until the defect has been remedied.	Check that the probe is correctly fitted or clean the socket.
9	Temperature sensor in steam generator defective (The program cannot be used until the defect has been remedied. However, programs that do not require the use of the steam generator can still be used.)		Replace heating element with sensor.

Error Code Number	Error Message	Possible Cause	Remedy
10	Condensation sensor defective (The oven can still be operated even if the defect is not remedied. However, the temperature in the drain will exceed 60°C and the defect should therefore be remedied as soon as possible.)		Replace sensor.
11	Water shortage in steam generator (The maximum water level in the steam generator has not been reached after 2 minutes of filling.)	Solenoid valve or dirt filter clogged, water supply blocked or water pressure too low (min. 1.5 bar). The program cannot be used until the defect has been remedied.	Clean solenoid valve or dirt filter. Check the water supply to the oven. Check that the water pressure is min. 1.5 bar.
13	Temperature in steam generator above 130 °C (The temperature of the upper heating element in the steam generator is above 130°C.)	Water shortage in steam generator or scale on heating elements. The program cannot be used until the defect has been remedied.	Stop the oven for approx. 5 min., then resume the program that was interrupted.
14	Breaking of phase	One or more phases in the power transmission to the oven is lacking, possibly due to a defective fuse. The program cannot be used until the defect has been remedied.	Check switchboard. Replace defective fuses, if any.
15	Incorrect phase sequence	• Fan rotates in the wrong direction. • 2 phases in the electric installation have been exchanged by mistake. The oven cannot be operated until the defect has been remedied.	Change about the 2 phases in the electric installation. Let the oven cool for 20-30 min., then restart it. Check that the direction of rotation of the fan is counter-clockwise (looking at the fan from inside the oven chamber).
16	Wiring defect at door switch	Wire for door switch short-circuited or interrupted. Cancel the message by pressing any key - reappears when the oven is restarted. The oven can be operated even if the defect is not remedied.	Replace door switch.

Test Functions

Certain Combi functions can be tested via the controller. This section explains how to access these functions and details what functions are available for each type of controller.

Accessing Test Functions with CVC Controller

To access the Test Function command, press and hold the F1 key while pressing the START/STOP key. A menu will appear showing the Test Functions command. Simply press the numeric 1 key to execute this command. The Test Functions display will appear and allow you to select/activate and navigate all the test functions. Return to the Test Function command by pressing F1. To return to the main display, press the ENTER/STEP key.

Accessing Test Functions with S Controller

To access the Test Functions press the up arrow key and the Time keys simultaneously for 5 sec. The time display shows the Test Function number (ex. dd 1). Navigate the functions by pressing the up and down arrow keys. The test functions can be interrupted/switched off any time by pressing the Storage key key. The output can be switched on and off constantly by pressing the ON/OFF key, or you can switch the output on and off by pressing the Manual key.

List of Test Functions

Number	Description	Controller without this feature	Comments
dd: 1	Oven heat		Can only be active when the fan is on
dd: 2	Steam generator heat	S, CVC	Can only be activated if there is water in the generator
dd: 3	Fan low		
dd: 4	Fan high		
dd: 5	Motor brake		To be active for max. 5 sec. only
dd: 6	Injection valve		
dd: 7	Flooding valve	S, CVC	
dd: 8	Drain pump	S, CVC	
dd: 9	Condensation valve		
dd: 10	Damper motor		
dd: 11	Exhaust		Works only if an external unit has been connected
dd: 12	Special Function		
dd: 13	Buzzer		Loud continuous sound when ON/OFF is activated
dd: 14	Interior light		
dd: 15	Oven sensor		Shows °C or Err if a defect occurs
dd: 16	Core temperature sensor		Shows °C or Err if a defect occurs (core temperature probe missing)

Number	Description	Controller without this feature	Comments
dd: 17	Steam generator sensor	S, CVC	Shows °C if Err if a defect occurs
dd: 18	Condensation sensor		Shows °C or Err if defect occurs
dd: 19	Motor Speed		
dd: 20	Oven door		Shows a symbol for door open or closed and Err if a defect occurs. Can be initialized by pressing exhaust key if door is closed and oven sensor normal
dd: 21	Water level in steam generator	S, CVC	Shows water level below min. and max. Temperature key: water in) CM and Core temperature key: water out) ST
dd: 22	Thermal cutout, 305°C		ON appears if OK, OFF if interrupted or a wiring defect has occurred
dd: 23	Thermal cutout, fan motor		ON appears if OK, OFF if interrupted or a wiring defect has occurred
dd: 24	Contacts in damper motor		ON appears when the contacts are connected and OFF if interrupted

Replacement

Changing halogen lamps in oven compartment

⚠CAUTION Replace Oven Halogen Lamps with 12V, 20W maximum.

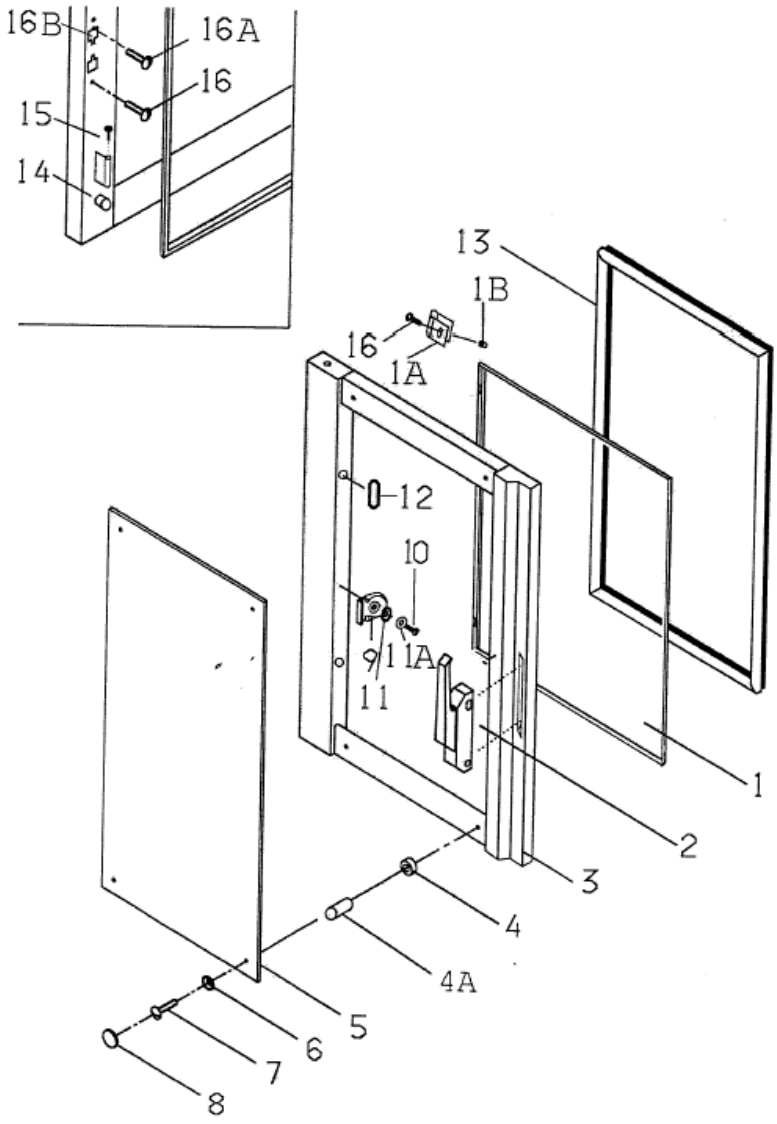
Remove the lamp glass by means of a screwdriver. Always use halogen lamps specially made for BKI Combis. Never touch the lamp without first protecting your fingers with gloves or a piece of cloth.

Replacement Parts

Use the information in this section to identify replacement parts. To order replacement parts, call your local BKI sales and service representative. Before calling, please note the serial number, model number and voltage on the rating tag affixed to the unit.

Assemblies

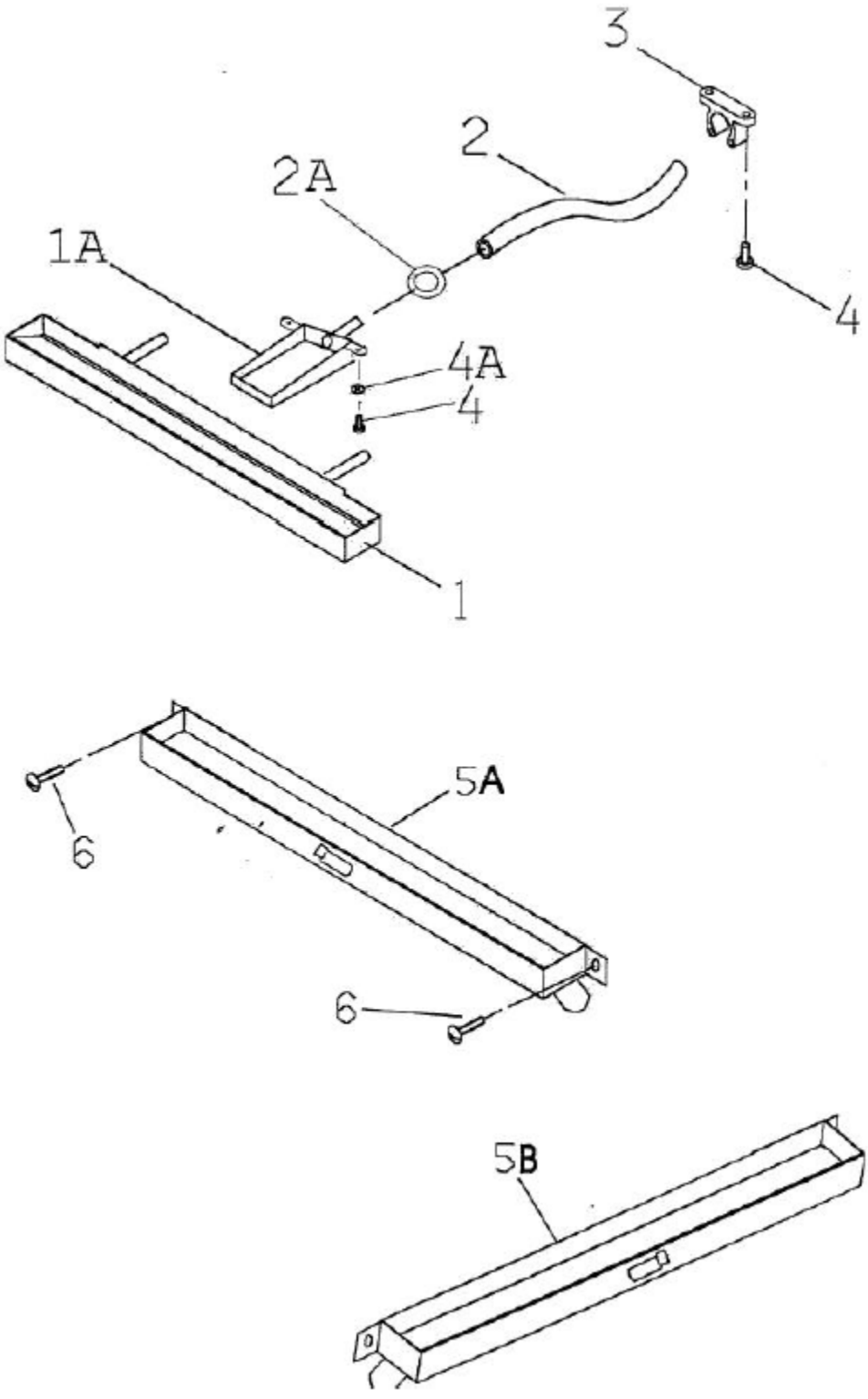
Door



POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	1.06	1	GL0295	Interior glass
1	1.08	1		Interior glass
1	1.10	1	GL0296	Interior glass
1	1.12	1		Interior glass
1	1.16	1		Interior glass
1	1.20	1		Interior glass

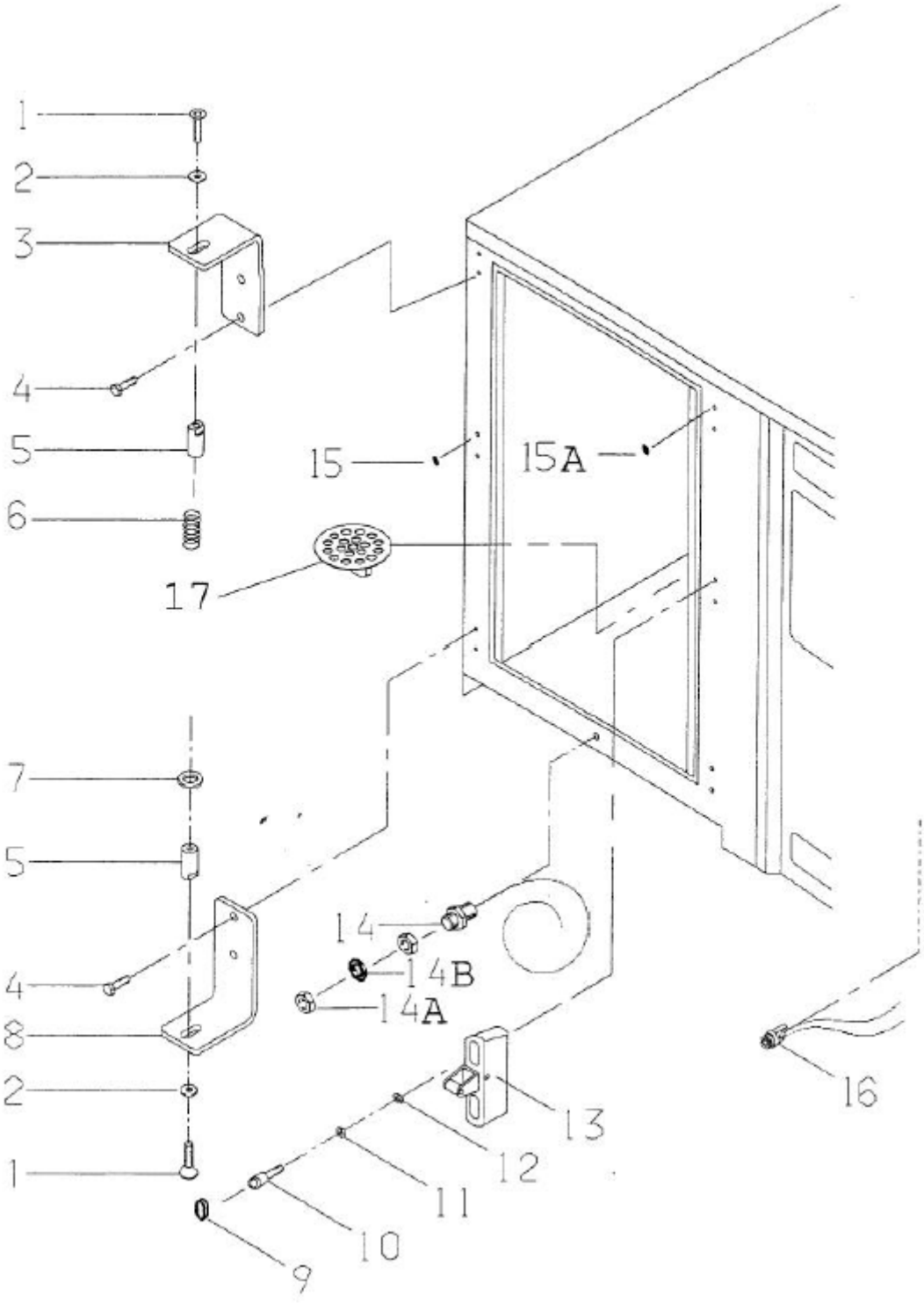
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	2.10	1	GL0297	Interior glass
1	2.14	1		Interior glass
IA	All	2-4	HN0309	Hinge bracket
1B	All	2-4	HN0310	Cap nut
2	All	I	H0137	Locking device, low
3	1.06		DF0299	Door
3	1.08	1		Door
3	1.10	1	DF0300	Door
3	1.12	1		Door
3	1.16	1		Door
3	2.10	1	DF0301	Door
3	2.14	1		Door
4	All	4	WSH265	Rubber washer
4A	All	4	F0181	Nylon hose
5	1.06	1	GL0292	Exterior glass, black
5	1.08	1		Exterior glass, black
5	1.10	1	GL0293	Exterior glass, black
5	1.12	1		Exterior glass, black
5	1.16	1		Exterior glass, black
5	1.20	1		Exterior glass, black
5	2.10	1	GL0294	Exterior glass, black
5	2.14	1		Exterior glass, black
6	All	4	WSH259	Washer
7	All	4	SCR416	Screw M5
8	All	4	F0180	Cover cap, black
9	All	2/4	HN0311	Clamp
10	All	2/4	HN0312	Screw
11	All	2/4	HN0313	Rubber washer
11A	All	2/4	HN0314	Washer
12	All	2	HN0315	Stopper, plastic
13	1.06	1	G0307	Door seal
13	1.08	1		Door seal
13	1.10	1	G0308	Door seal
13	1.12	1		Door seal
13	1.16	1		Door seal
13	1.20	1		Door seal
13	2.1 0	1	G0309	Door seal
13	2.14	1		Door seal
14	All	4	HN0316	Stopper, rubber
15	All	4	F0361	Stopper, plastic
16	All	4-6	HN0312	Screw
16A	All	1	HN0318	Screw
16B	All	1	HN0319	Piece for handle

Drip Tray



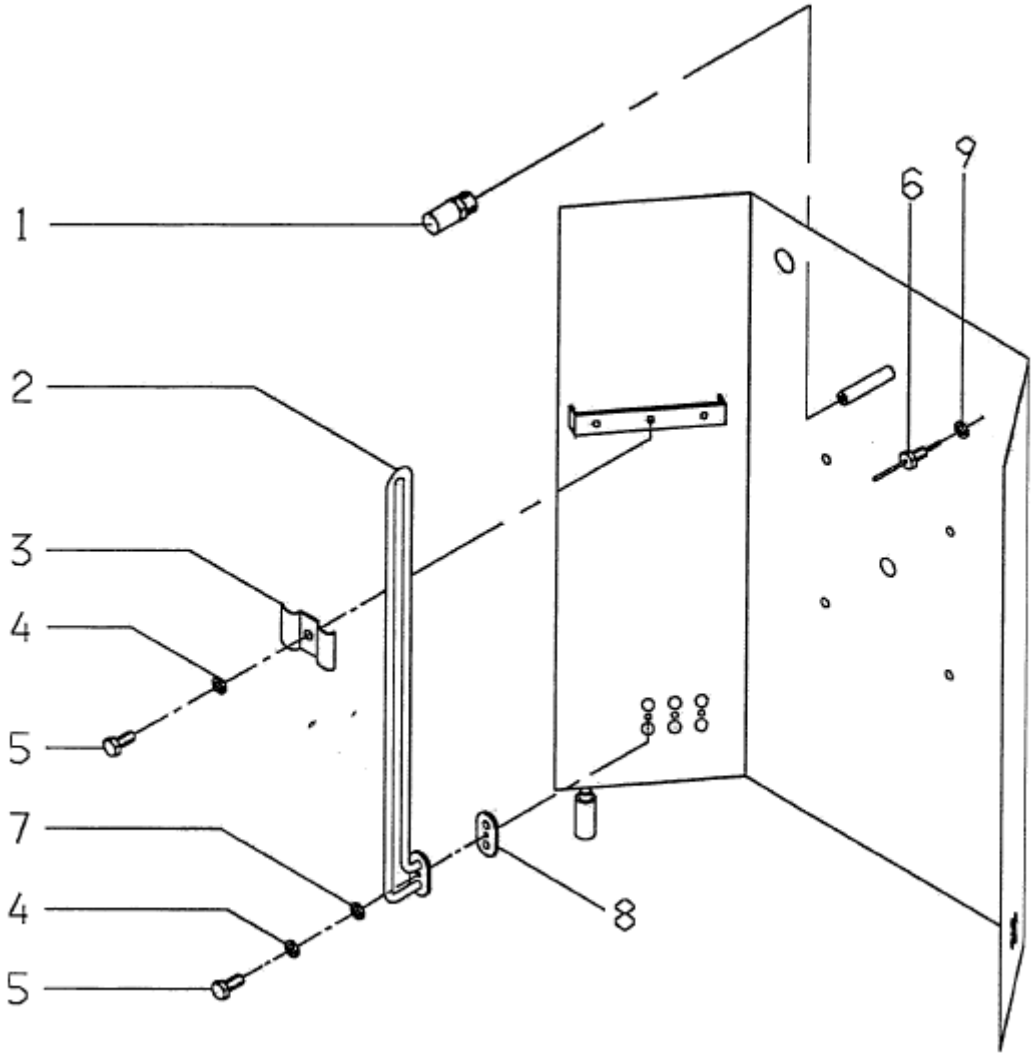
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	1.06-1.10	1	DT0009	Drip tray
1	2.10	1	DT0008	Drip tray
IA	All	1	DT0007	Discharge tray
2	All	1	H0099	Hose
2A	All	1	F0183	Clamp
3	All	1	F0184	Holder
4	All	4		Screw
4A	All	2		Washer
5A	1.06 -1.10	1	DT0005	LH Drip slide
5A	2.10	1	DT0006	LH Drip slide
5B	1.06 -1.10	1	DT0010	RH Drip slide
5B	2.10	1	DT0011	RH Drip slide
6	All	2	HN0312	Screw

Front



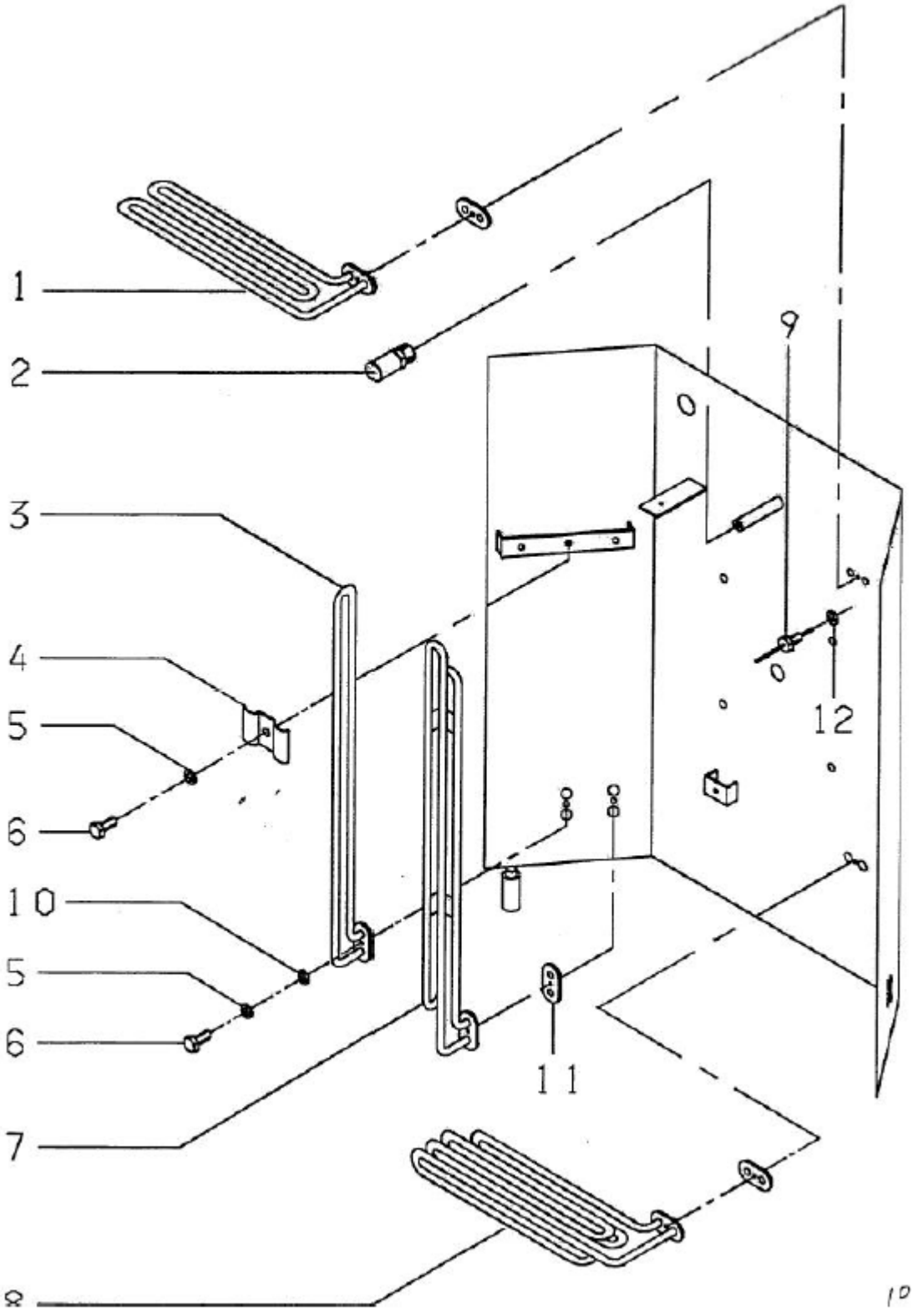
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	2	HN0300	Screw, M6
2	All	2	HN0301	Washer
3	All	1	HN0302	Hinge, upper
4	All	4	HN0303	Screw, M6
5	All	2	HN0304	Bushing
6	All	1	HN0305	Spring
7	All	1	HN0306	Washer, copper
8	All	1	HN0307	Hinge, lower
9	All	2		Cover for catch
10	All	2		Screw
11	All	2		Washer, spring
12	All	2		Washer
13	All	1	C0506	Catch
14	All	1	S0349	Sensor, inductive
14A	All	3		Plastic nut
14B	All	1		Sealing
15	All	1		Stopper, plastic
15A	All	4		Plastic plug
16	All	1	FT0535	Socket for probe
17	All	1	HN0308	Grating for drain

Heating Elements Model 1.06



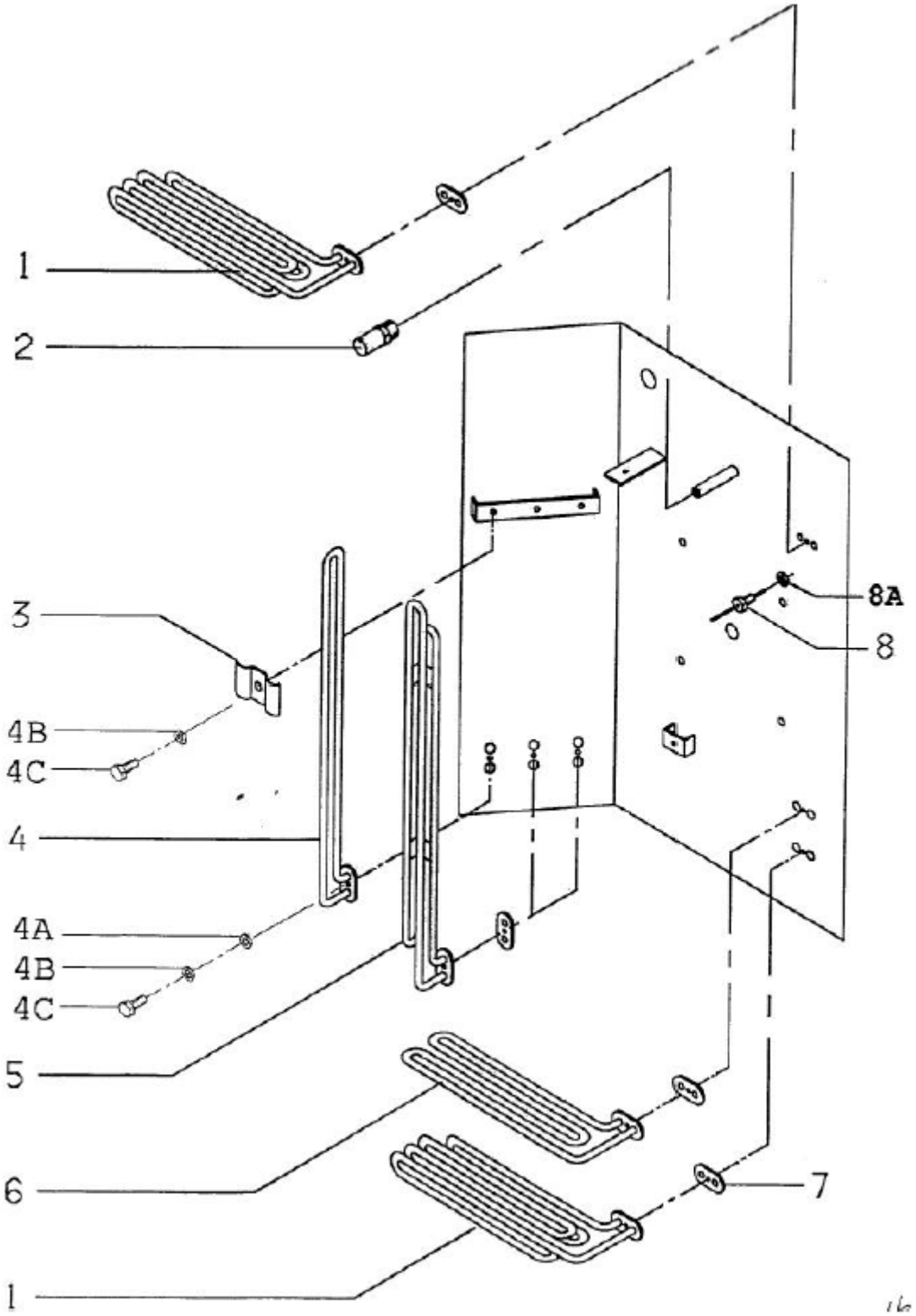
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1		1	NZ0005	Nozzle, elbow
2	3 x 208V	6	C0106	Heating element 1300W
3		4		Pipe holder
4		10		Washer
5		6		Screw
6		1	T0093	Temperature sensor
7		6		Washer
8		6		Gasket
9		1		Washer

Heating Elements Model 1.10



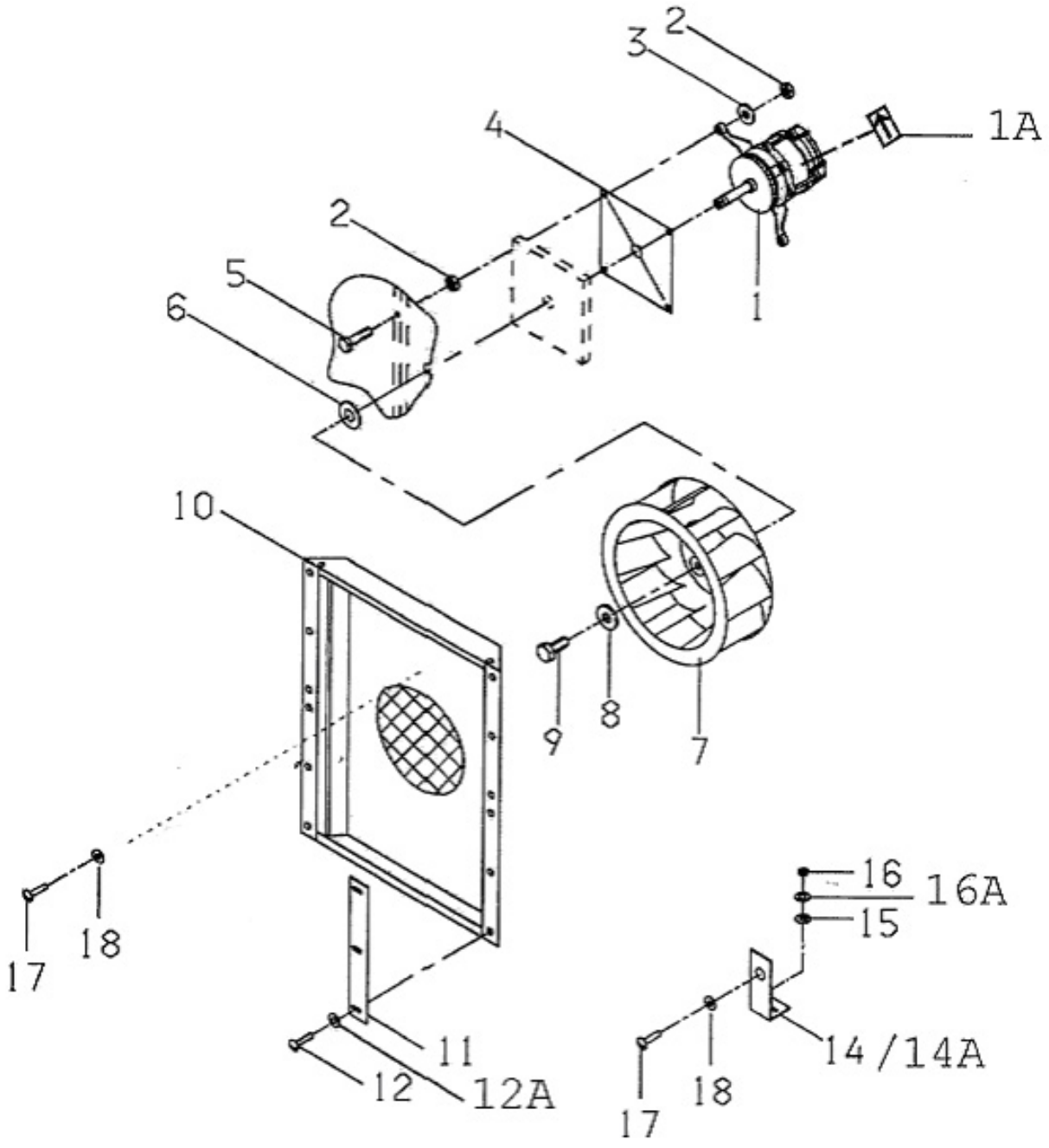
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	3 x 208V	1	C0103	Heating element 1650W
2	All	1	NZ0005	Nozzle, elbow
3	3 x 208V	2	C0104	Heating element 1650W
4	All	4		Pipe holder
5	All	10		Washer
6	All	10		Screw
7	3 x 208V	2	C0105	Heating element 3300W
8	3 x 208V	1	C0102	Heating element 3300W
9	All	1	T0093	Temperature sensor
10	All	6		Washer
11	All	6		Gasket
12	All	1		Washer

Heating Elements Model 2.10



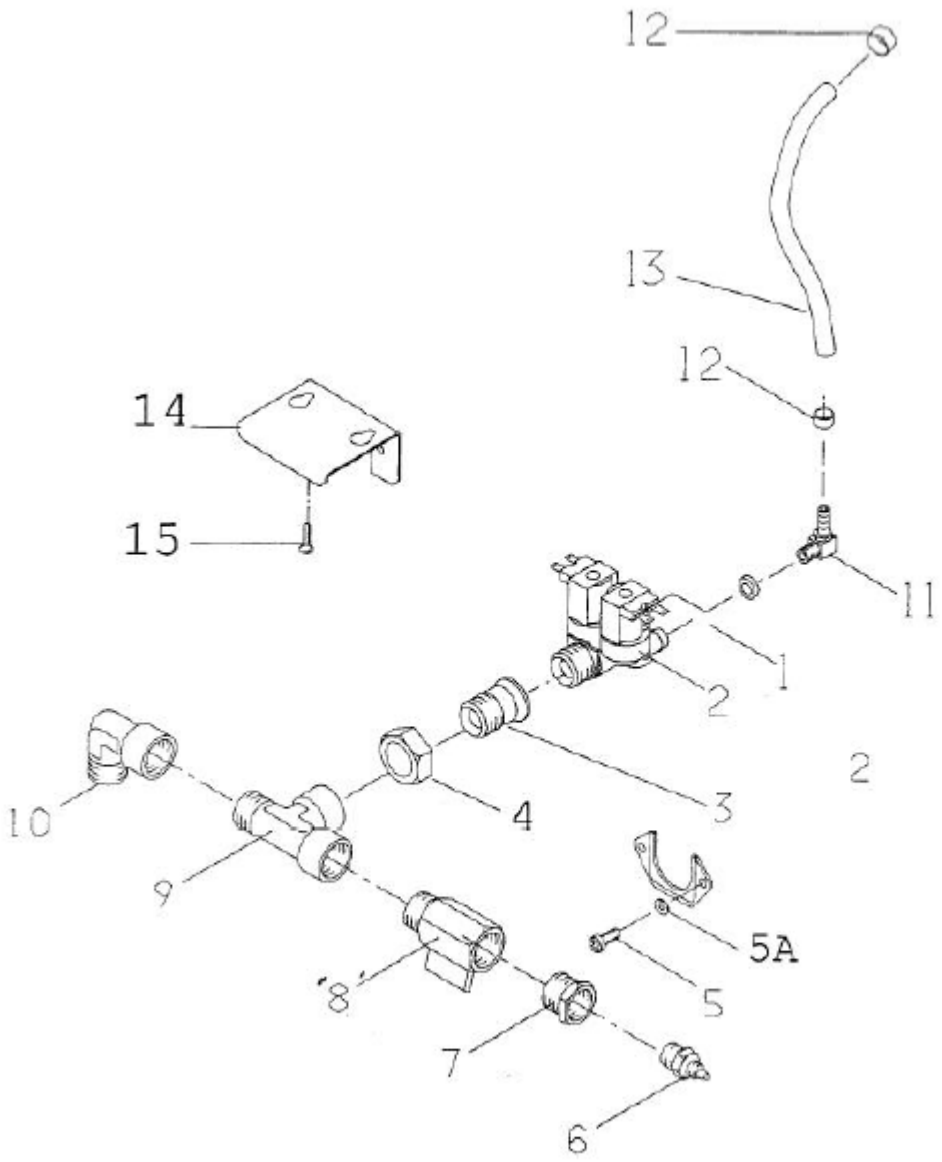
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	3 x 208V	2	C0102	Heating element 3300W
2	All	1	NZ0005	Nozzle, elbow
3	All	8		Pipe holder
4	3 x 208V	2	C0104	Heating element 1650W
4A	All	9		Washer
4B	All	17		Washer, spring
4C	All	17		Screw
5	3 x 208V	4	C0105	Heating element 3300W
6	3 x 208V	1	C0103	Heating element 1650W
7	All	9		Gasket
8	All	1	T0093	Temperature sensor
8A	All	1		Washer

Motor



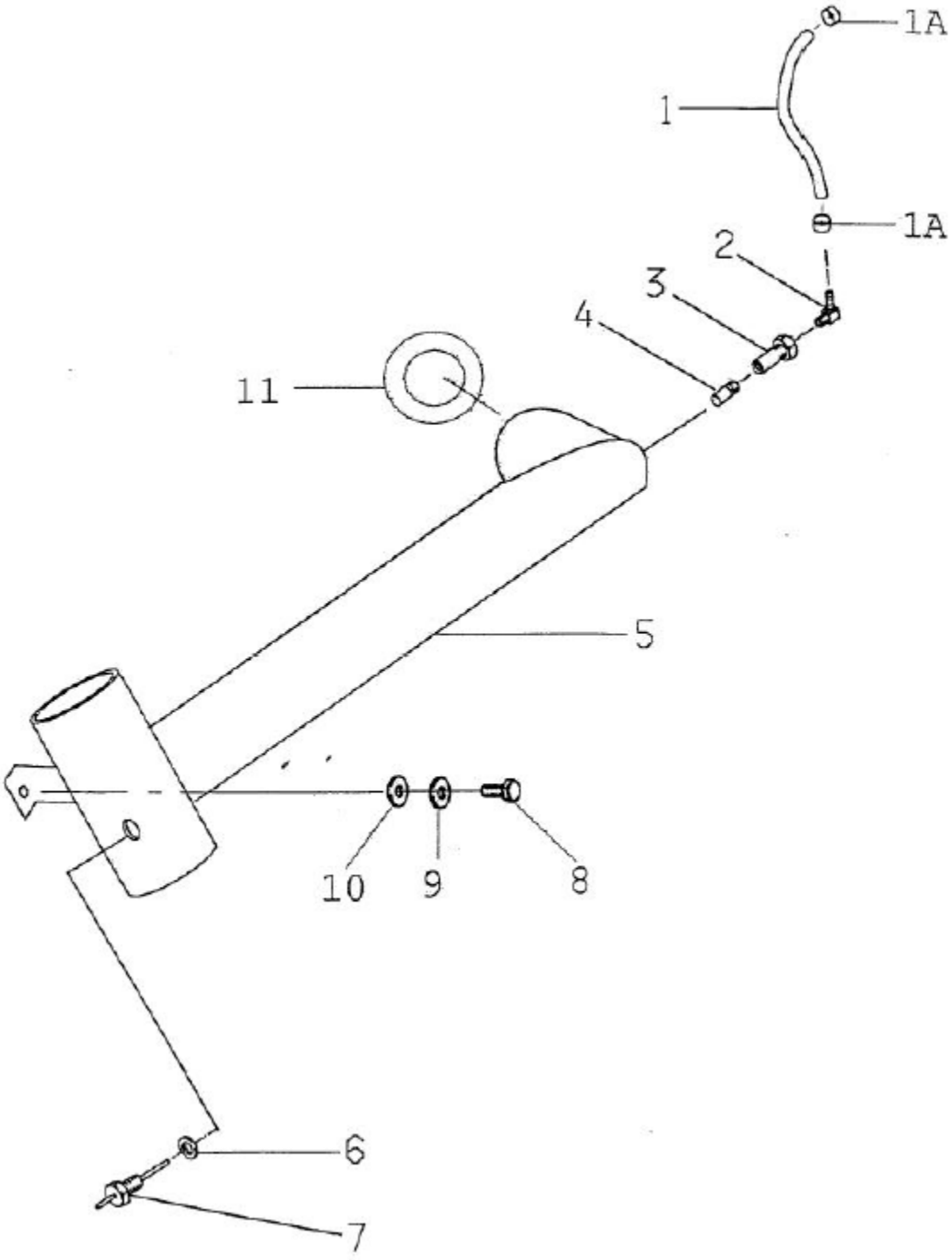
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	1	M0080	Fan 3 x 208V
1A	All	1		Arrow (sticker)
2	All	8	HN0331	Nut M8
3	All	4	HN0321	Washer M8
4	All	1		Motor plate
5	All	4	HN0322	Screw M8
6	All	1	HN0323	Gasket
7	All	1	HN0324	Fan
8	All	1	HN0325	Washer MIO
9	All	1	HN0320	Screw MIO
10	1.06	1		Filter housing
10	1.08	1		Filter housing
10	1.10	1		Filter housing
10	1.12	1		Filter housing
10	1.16	1		Filter housing
10	1.20	2		Filter housing
10	2.10	1		Filter housing
10	2.14	1		Filter housing
11	1.06	4		Flap
11	1.08	4		Flap
11	1.10	4		Flap
11	1.12	4		Flap
11	1.16	4		Flap
11	1.20	8		Flap
11	2.14	4		Flap
12	All	X		Screw M6
12A	All	X		Washer
14	All	2		Stop plate
14A	All	2		Stop plate
15	All	2		Washer
16	All	2		Nut
16A	All	2		Washer, spring
17	11	3	HN0327	Snap screw
18	All	3	HN0328	Retainer

Solenoid Valve



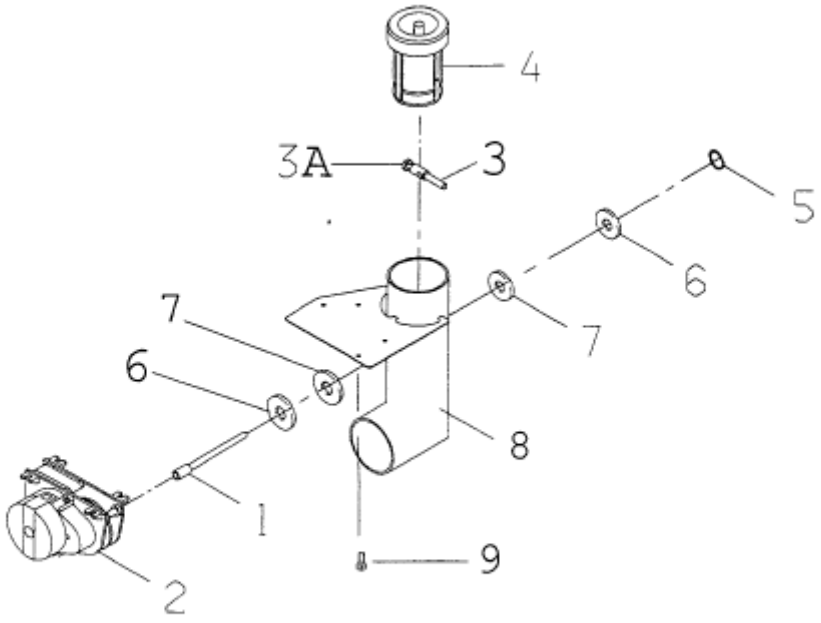
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	2		Divider 1,2 L
2	All	1	SV0011	Solenoid valve, 2 way
3+4	All	1		Connection
5	All	2		Screw M4
5A	All	2		Washer
6	All	1		T-connector
7	All	1		Ball valve
8	All	1		Reducing
9	All	1		Nipple
10	All			Elbow
11	All	2		Nipple, elbow
12	All	4		Clamp
13	All	6 ft.		Hose
14	All			Bracket
15	All	2		Screw M5
*	All			Nozzle and cooling

Condensation/Drain



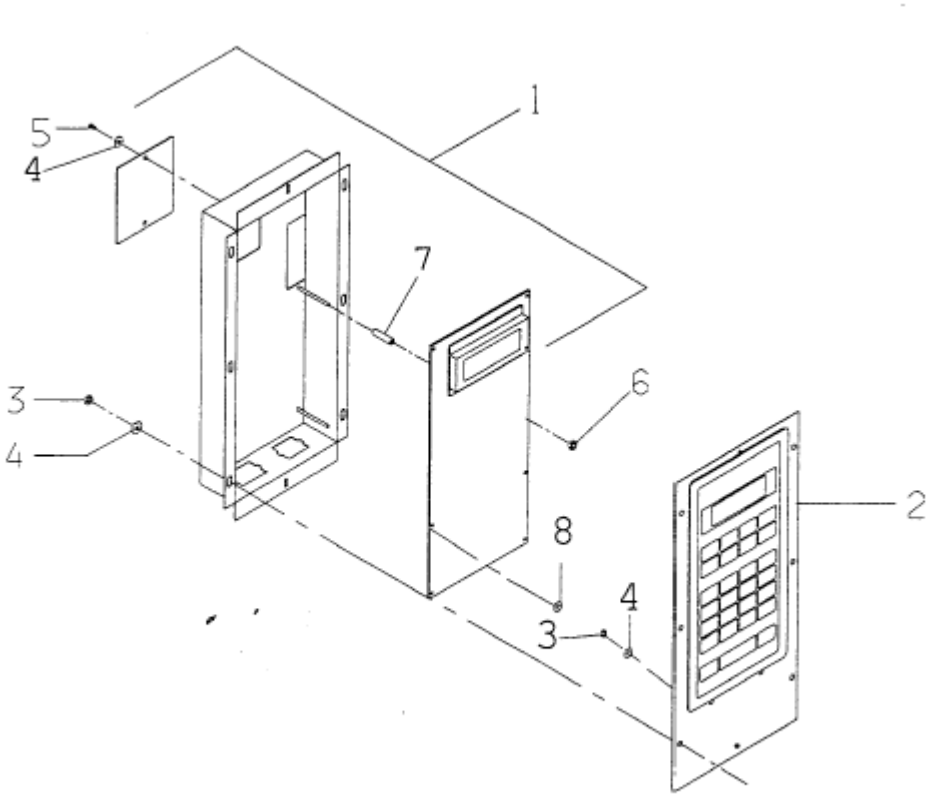
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	5 ft		Hose
1 A	All	2		Clamp
2	All	1		Nipple, Elbow
3	All	1		Extension tube
4	All	1		Nozzle
5	1.06-1.10	1		Manifold
5	2.10	1		Manifold
6	All	1		Washer
7	All	1	T0092	Temperature sensor
8	All	1		Screw
9	All	1		Washer, spring
10	All	1		Washer
11	All	1	HN0339	O-ring

Exhaust/Vent



POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	1		Shaft
2	All	1	M0081	Damper motor
3	All	1		Arm
3A	All	1		Screw
4	All	1	V0021	Valve
5	All	2		Locking ring
6	All	4		Washer M5
7	All	2		Gasket
8	All	1		Tube for damper
9	All	2		Screw

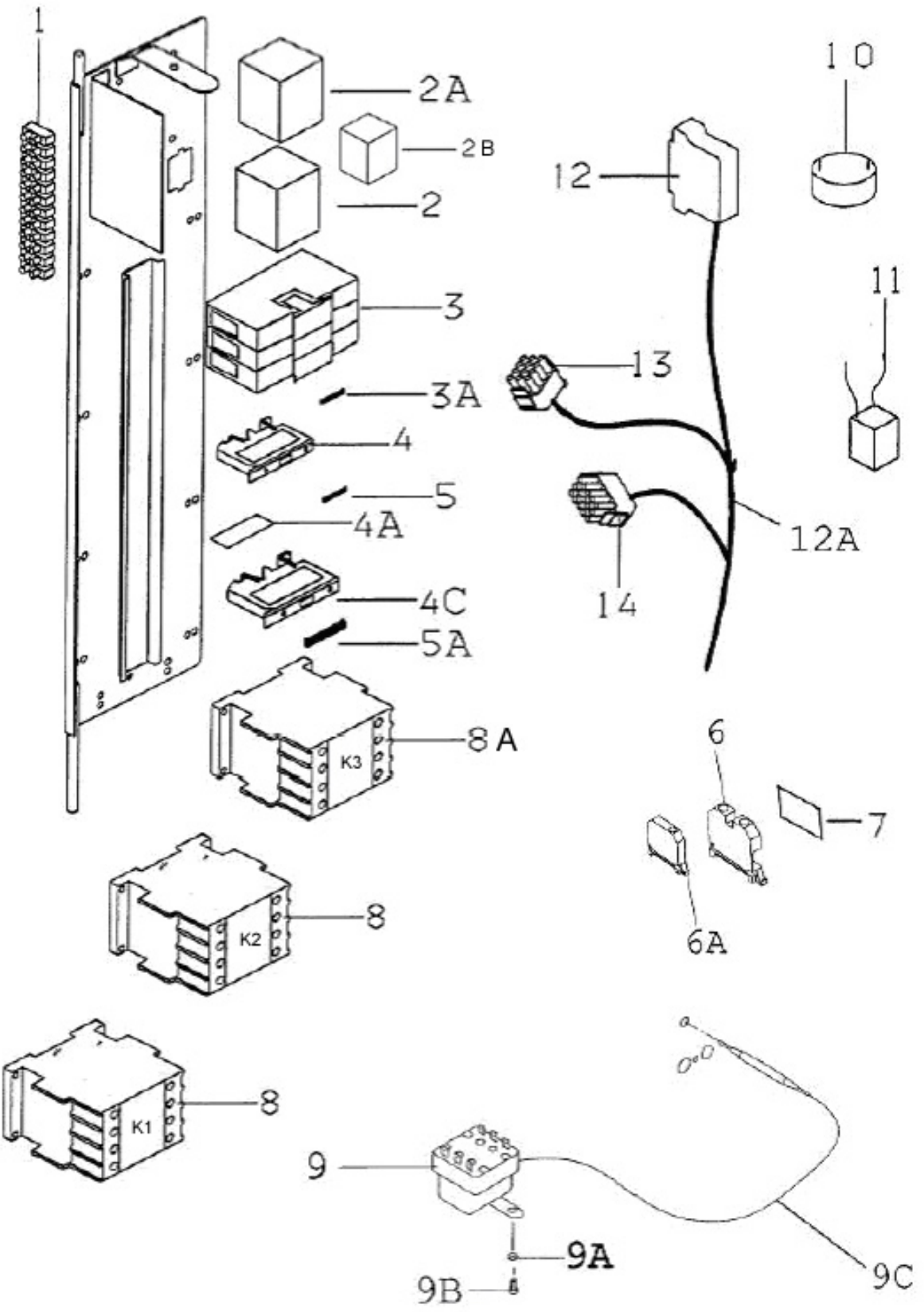
Computer Controller



POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	1	CP0038 CP0044 CP0042	Computer CVC Model * Computer S Model Computer VS Model
2	All	1	C0742 C0745 C0746	Touch Pad CVC Model * Touch Pad S Model Touch Pad VS Model
3	All	10		Nut, plastic M3
4	All	10		Washer M3
5	All	2		Screw
6	All	6		Self-locking nut
7	All	6		Spacer
8	All	1		Washer, fibre

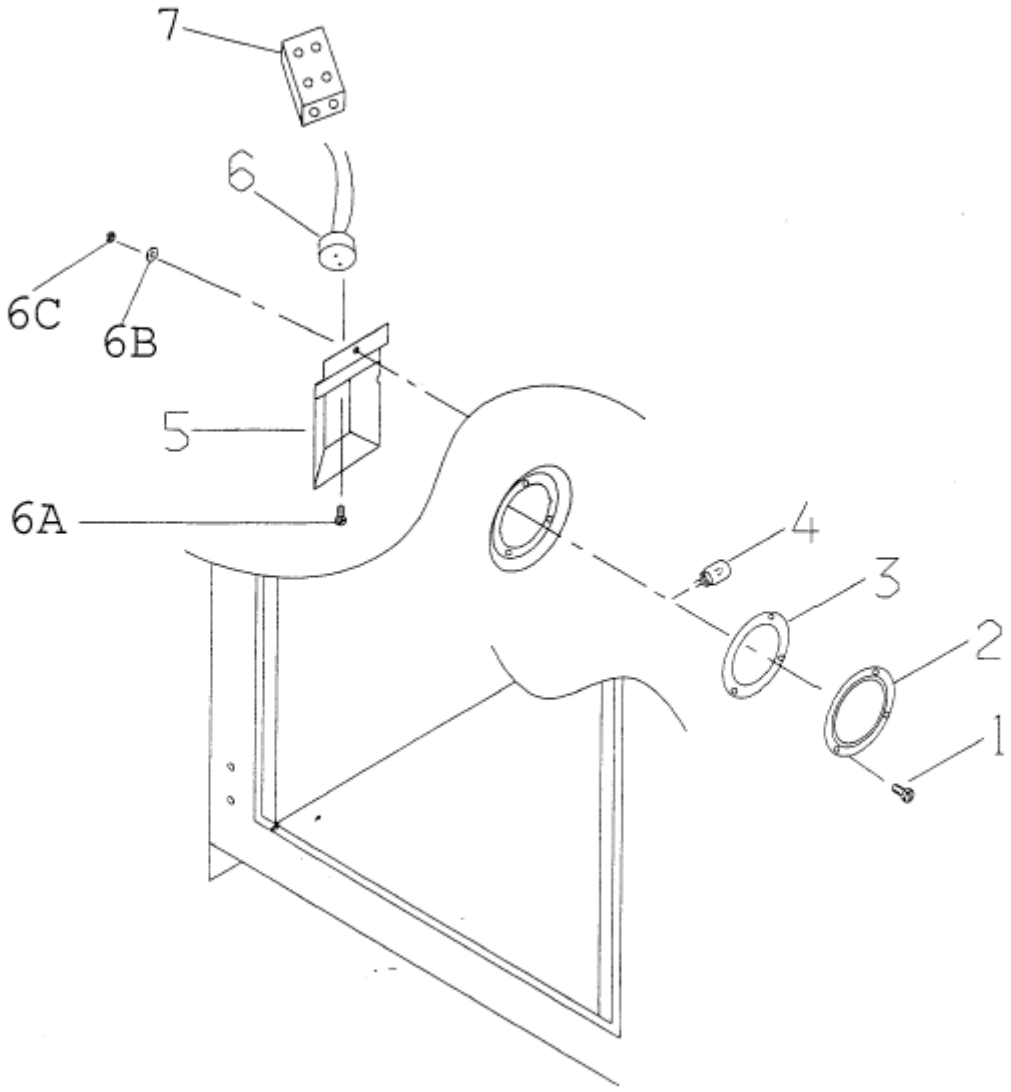
** - Shown on opposite page.*

Wiring Harness



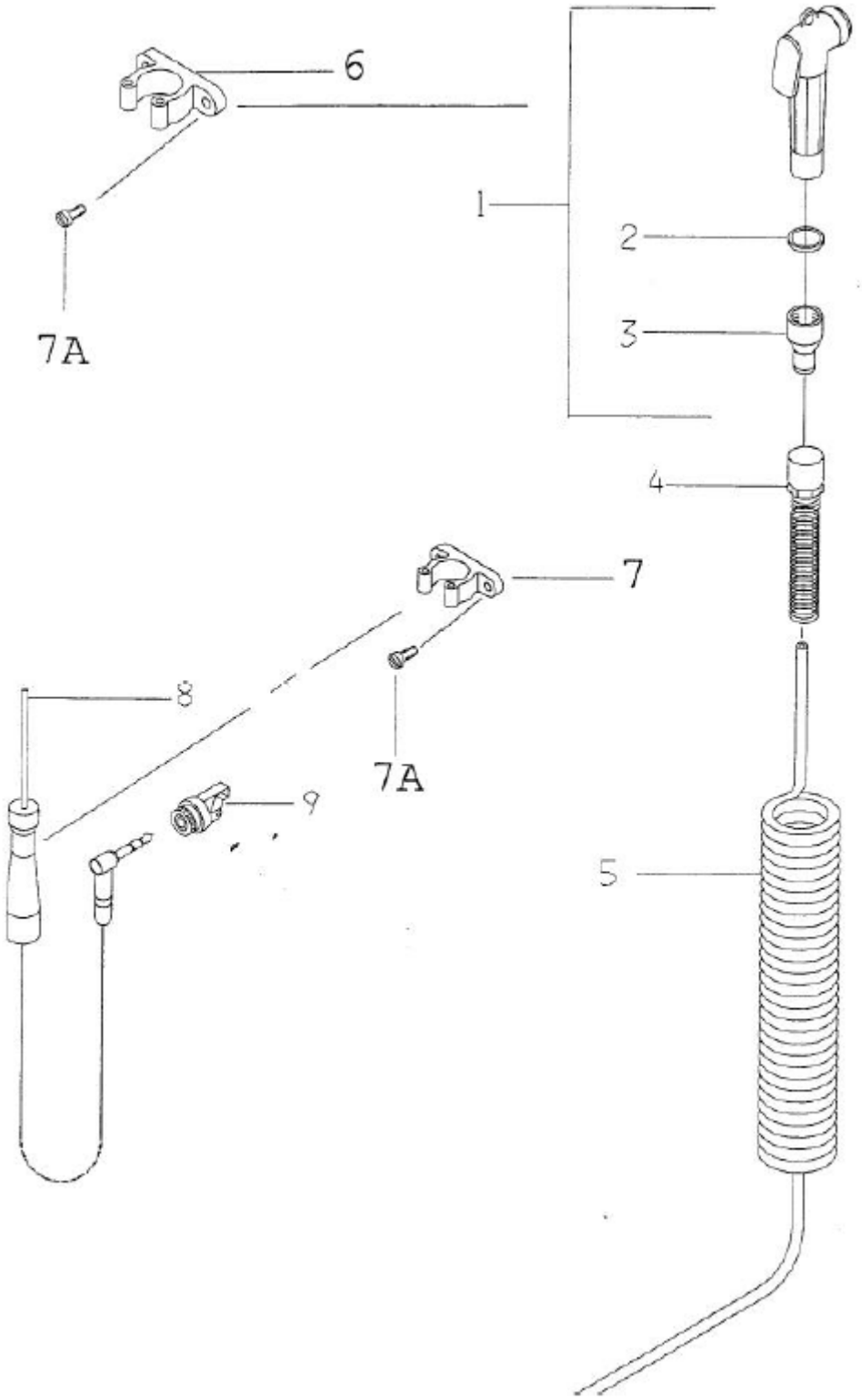
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	1	TB0060	Terminal strip
2	All	1	HN0334	Transformer 17V
2A	All	1-2	HN0335	Transformer 24V
2B	All	1-2	HN0333	Transformer 12V
3	All	1	FH0009	Fuse holder
3A	All	3	F0179	Fuse 4A
4	All	4	FH0011	Fuse holder
4A	All	1		Plate
4C	All	2	FH0010	Fuse holder
5	All	2	F0176	Fuse 0.8A
5	All	2	F0177	Fuse 3A
5A	All	2	F0178	Fuse 8A
6	All	3	TB0061	Terminal block
6A	All	1		Stop
7	All	1		Plate
8	1.06 & 1.10	2	R0165	Contactor (K1, K2)
8	2.10	2	R0167	Contactor (K1, K2)
8A	ALL	1	R0164	Contactor (K3)
9	All	1	T0094	Temp. circuit break
9A	All	2		Washer
9B	All	2		Screw
9C	All	6 ft.		Flex hose, black
10	All	1	B1006	Buzzer
11	All	1		RC block for motor
12	All	1		Connector 37 pole
12A	All	10 ft.		Spiral wrapping
13	All	1.		Plug 12 pole
14	All	1		Plug 15 pole

Interior Light



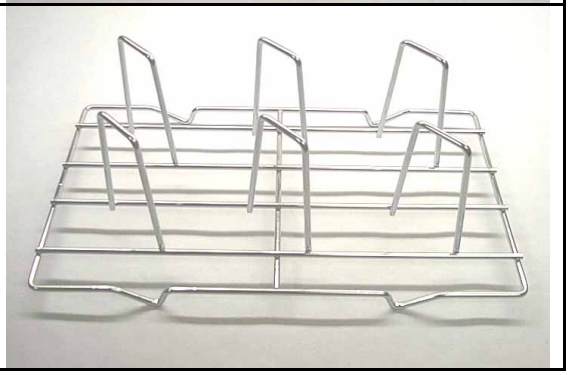
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	3-12		Screw
2	All	1-4	GL0287	Lamp glass
3	All	1-4	HN0336	Gasket
4	All	1-4	B0562	Halogen lamp
5	All	1-4	HN0337	Lamp housing
6	All	1-4		Socket
6A	All	2-8		Screw
6B	All	1-4		Washer
6C	All	1-4		Nut
7	All	1-2		Porcelain connector

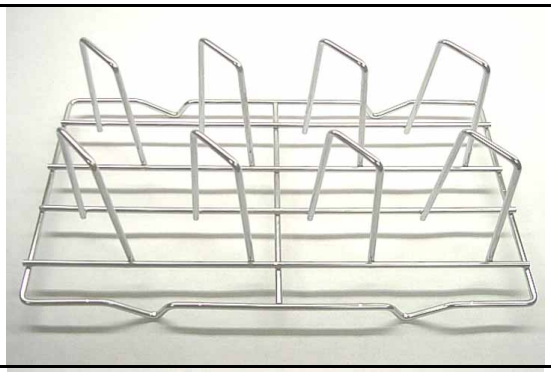
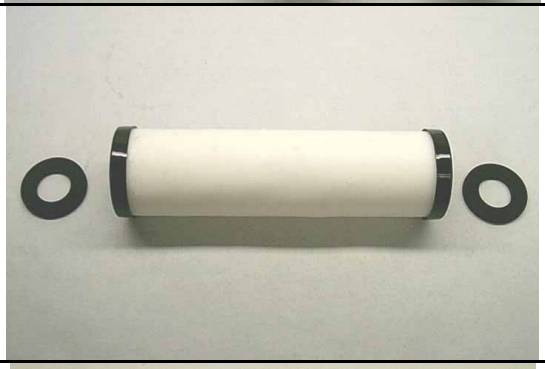
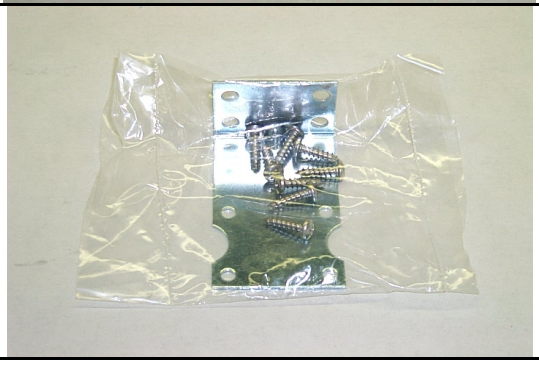
Hand Shower and Probe

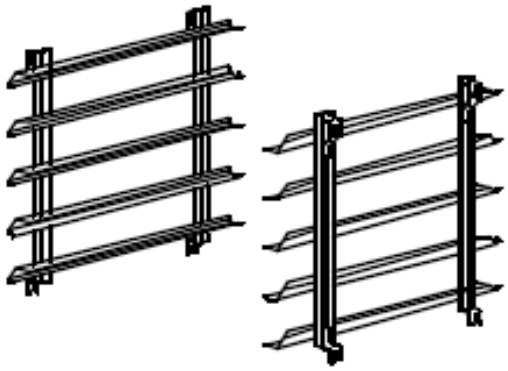
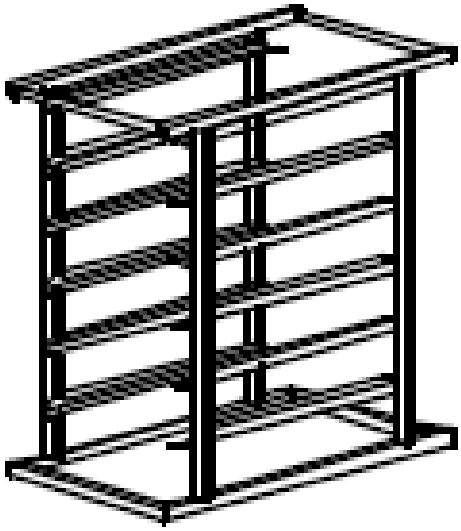


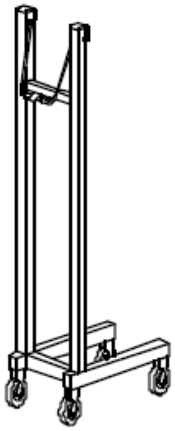
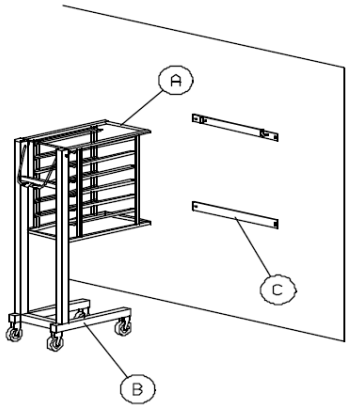
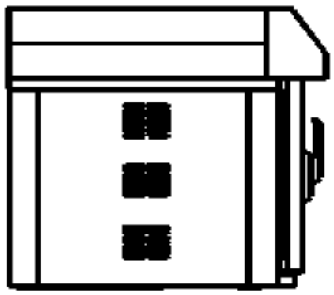
POS	TYPE	QTY	BKI PART NO	DESCRIPTION
1	All	1	HS0050	Hand shower
2	All	1		Gasket
3	All	1		Connection
4	All	2		Spring for hand shower
5	All	1	HN0338	Hose
6	All	2	HN0329	Clamp plastic
7	All	1	HN0330	Terminal, plastic
7A	All	6		Screw
8	All	1	C0741	Probe, core temp.
9	All	1		Socket
	All	1	HN0332	Cleaning & Accessory Kit

Accessories

DESCRIPTION	PART NO	PICTURE
1.10 Grid Shelf	R0094	
2.10 Grid Shelf	R0095	
6 Bird Chicken Rack	R0096	

DESCRIPTION	PART NO	PICTURE
8 Bird Chicken Rack	R0097	
Kit, Filter Housing–Clear	FX0001	
Scale Stick	FX0002	
Bracket Kit for Housing	FX0003	

DESCRIPTION	PART NO	PICTURE
Wrench, Filter Housing	FX0004	
Housing–Clear	FX0005	
Rack Slides (Type 1.06 only) Rack Slides (Type 1.10 only)	R0091 R0092	
Rack Cassette (Type 2.10 only)	R0093	

DESCRIPTION	PART NO	PICTURE
Rack Trolley without drip tray (shown) Rack Trolley with drip tray	104225A 104226A	
Wall Brackets	*	
Extraction Hood	*	

** - These accessories are not stocked. Call BKI Customer Service to special order this.*

Notes

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